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ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES

UPPER COOK INLET COMMERCIAL FISHERIES

ANNUAL MANAGEMENT REPORT, 1991

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TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

LIST OF TABLES

LIST OF TABLES (Continued)

LIST OF FIGURES

LIST OF APPENDICES

LIST OF APPENDICES (continued)

INTRODUCTION

The Upper Cook Inlet management area consists of that portion of Cook Inlet north of the latitude of Anchor Point and is divided into the Central and Northern Districts (Figure 1). The Central District is approximately 75 mi long, averages 32 mi in width, and is further subdivided into six subdistricts. The Northern District is 50 mi long, averages 20 mi in width and is divided into two subdistricts. At present, all five species of Pacific salmon (*Oncorhyncus*), razor clams (*Siliqua patula*), and Pacific herring (*Clupea harengus pallasi*) are subject to commercial harvest in Upper Cook Inlet. Harvest statistics are gathered and reported by five-digit statistical areas and sub-areas (Figure 2).

Salmon

Since the inception of a commercial fishery in 1882, many gear types, including fish traps, gill nets, and seines have been employed with varying degrees of success to harvest salmon in Upper Cook Inlet. Currently, set (fixed) gill nets are the only gear permitted in the Northern District, while both set and drift gill nets are used in the Central District. The use of seine gear is restricted to the Chinitna Bay Subdistrict where they are employed only sporadically. Drift gill nets have accounted for 60% of the average annual salmon harvest since 1966 with set gill nets harvesting virtually all of the remainder (Appendix A.1-6).

Commercial salmon harvest statistics specific to gear type and area are available only back to 1954 (Appendix A.7). Run-timing and migration routes utilized by all species overlap to such a degree that the commercial fishery is largely mixed-stock and mixed-species in nature. Typically, the Upper Cook Inlet harvest represents approximately 5% of the statewide catch.

In terms of their economic value, sockeye salmon (*O. nerka*) are by far the most important component of the catch followed by chum (*O. keta*), coho (*O. kisutch*), pink (*O. gorbuscha*) and chinook salmon (*O. tshawytscha*) (Appendix A.8).

Herring

Commercial herring fishing began in Upper Cook Inlet in 1973 with a modest harvest of bait-quality fish along the east side of the Central District and has expanded in recent years to include small-scale sac roe fisheries in Chinitna and Tuxedni Bays (Appendix A.9). The total herring harvest has averaged less than 400 tons having an exvessel value below $200,000, one of the smallest herring fisheries in the state. Presently, Upper Cook Inlet herring stocks are generally depressed and harvest levels have declined substantially.

Because the glacial waters of Upper Cook Inlet preclude the use of aerial surveys to estimate biomass of herring stocks, the management approach utilized has necessarily departed from the standard techniques employed in the more traditional herring fisheries. Present management policy allows for modest changes in harvest levels on a yearly basis, monitoring catches for shifts in age composition, and establishing harvest levels that appear to be sustainable. Gill nets are the only legal gear for herring in Upper Cook Inlet with set gill nets

being used almost exclusively. Harvests are generally concentrated in the Clam Gulch area (bait herring) and in the Snug Harbor and Magnetic Island areas of Tuxedni Bay and near Clam Cove and Camp Point in Chinitna Bay (roe herring).

Razor Clams

The commercial harvest of razor clams from Upper Cook Inlet beaches dates back to 1919. Harvest levels have fluctuated from no fishery for as many as eight consecutive years to production in excess of half a million pounds (live weight) in 1922 (Appendix A.10). The sporadic nature of the fishery has been more a function of limited market opportunities rather than limited availability of the resource.

Razor clams are present in many areas of Cook Inlet with particularly dense concentrations occurring near Polly Creek on the western shore and from Clam Gulch to Ninilchik on the eastern shore. The eastern shoreline has been set aside for sport harvest only since 1959 and all commercial harvests since that time have come from the west shore, principally from the Polly Creek area. A large portion of the Polly Creek beach is approved for the harvest of clams for the human food market. Bait clams may be taken only outside of this approved area. No size restrictions or overall harvest limits are in place for any area. Virtually all of the commercial harvest has come by hand-digging although regulations prior to 1990 allowed the use of mechanical harvesters (dredges) south of Spring Point or within a one mile section of the Polly Creek beach. Numerous attempts to develop feasible dredging operations were largely unsuccessful due to excessive shell breakage or the limited availability of clams in the area open to this gear.

1991 COMMERCIAL SALMON FISHERY

The 1991 commercial harvest of 2.9 million salmon in Upper Cook Inlet is well below the 3.8 million average annual harvest and the smallest harvest in twelve years. The harvest was valued at approximately $15.25 million, a substantial reduction from the $40 million value of the previous year and lowest value since 1981. The Upper Cook Inlet commercial salmon harvest accounted for 4.9% of the statewide salmon harvest value.

Throughout the 1991 season, emergency order announcements and fishery updates were provided to radio stations in Homer and the Kenai-Soldotna area and were provided to processors, fishermen's organizations and other agencies via electronic facsimile. Emergency orders and daily escapement information were also made available through 24-hour recorded message telephone lines.

Meeting in Anchorage in December of 1990, the Alaska Board of Fisheries enacted a number of regulatory changes directly affecting the Upper Cook Inlet commercial salmon fishery. To allay concerns that some fishermen were fishing excess gear, all set net fishermen, except those fishing on Fire Island, were required to purchase buoy stickers from the Department and have valid stickers on buoys attached to each net. The Kenai River Late Chinook Salmon Management Plan (5AAC

21.359) was amended to include a "yellow zone" whereby if the projected chinook salmon spawning escapement were to fall between 15,500 and 19,000, the Upper Subdistrict set net fishery and the drift fishery within three miles of the northern Kenai Peninsula shoreline would be restricted to regular periods only. The restriction would be lifted if the in-river sockeye salmon escapement estimate was projected to exceed 700,000. Additionally, no reduction in closed waters at the Kenai River mouth would be permitted during periods when chinook salmon escapement projections fell below 22,300. The Fish Creek Sockeye Salmon Management Plan (5AAC 21.364) altered to provide for fixed fishing periods each Tuesday and Sunday from 7:00 A.M. to 7:00 P.M. during the period from July 15 though July 26. Delays in the administrative procedure for adopting regulatory changes kept all of the above changes from becoming effective until July 21.

Sockeye Salmon

The 1991 sockeye salmon harvest of 2.2 million fish was just slightly above the long-term average of 2 million and the smallest catch since 1984. Valued at $12.3 million, the sockeye salmon harvest comprised 80% of the value of the total commercial salmon fishery. The distribution of the catch between drift gear (51%) and set net gear (49%) differed slightly from the long-term average (57.5% drift).

Management of the Upper Cook Inlet sockeye salmon fishery integrates information received from a variety of programs which together provide an in-season model of the actual return. These programs include offshore test fishing, escapement enumeration by sonar and weir, comparative analysis of historic commercial harvest and effort levels, and age composition studies.

The offshore test fishing program employs a chartered gill net vessel fishing standardized stations along a transect crossing Cook Inlet from Anchor Point to the Red River delta. The program provides an in-season estimation of sockeye salmon run-strength by determining fish passage rates (computed by correlating the vessel's daily catch with subsequent commercial harvests and escapement) and fitting these rates to the appropriate historic run-timing profile (Table 1). In 1991, the program was conducted aboard the F/V *Corrina Kay*.

Hydroacoustic devices to quantify salmon escapement into glacial rivers were first employed in Upper Cook Inlet in the Kenai and Kasilof Rivers in 1968 and expanded to the Susitna River in 1978 and the Crescent River in 1979 (Appendix A.11). Operations followed standard procedures in all systems in 1991 and no unusual problems were observed (Table 2). As in the past six years, the Susitna River escapement was monitored by sonar in the Yentna River tributary only due to technical problems with obtaining satisfactory estimates within the mainstem of the Susitna. The Yentna River escapement goal of 100,000 to 150,000 sockeye salmon was established based on the historical proportion of the total Susitna River escapement utilizing this tributary. Weirs placed on Fish Creek and Packers Creek provided daily escapement counts for those systems.

Upper Cook Inlet commercial catch statistics refined to gear type, area and date are available back to 1966. Availability of these statistics in a computerized

database format make them extremely valuable for evaluating in-season fishery performance. The 1991 commercial catch by gear type and area can be found in Table 3 while catches by period and area are contained in Tables 4 through 8. Total harvest by statistical area and average catch per permit are contained in Tables 9 and 10. A summary of emergency orders can be found in Table 11 and a summary of fishing periods by gear type and area in Table 12.

Inseason determination of the age composition of sockeye salmon entering the principle rivers frequently provides information helpful in estimating the stock contributions in various fisheries. During the 1991 fishery approximately 20,000 sockeye salmon were examined from catch and escapement samples.

The 1991 season began with the May 27 opening of the sockeye salmon fishery near Big River in the Kustatan Subdistrict. A management plan adopted by the Board of Fisheries first opened this fishery in 1989. Difficulties in enforcing closed waters areas during 1989 resulted in a new definition of these areas by emergency order for the 1990 and 1991 seasons and also reduced fishing time to two weekly periods instead of three to compensate for the expected increased effectiveness of the fishery. By the regulatory close of this fishery on June 24, 11,809 sockeye salmon were harvested and the chinook salmon catch of 853 fish nearly equaled the quota of 1,000 established for this fishery. While the 1991 sockeye salmon harvest was somewhat improved over prior years the results remain substantially below that initially envisioned by the Board, the staff and the participating fishermen. Forty-one permit holders were active in this fishery.

The sockeye salmon return to the Crescent River on the west side of the Central District is sufficiently segregated from the other July sockeye salmon runs to allow management measures to be taken solely within the Western Subdistrict set gill net fishery. The 1991 return was extremely poor, and when escapement rates into the Crescent River fell well behind schedule, the Western Subdistrict set net fishery was closed on July 12 until further notice. Continued marginal escapement rates prolonged the closure until the effective end of the sockeye salmon return - the area was not reopened until August 2. The resulting Western Subdistrict catch of 17,195 sockeye salmon was the lowest on record and only about one-third the long-term average. The Crescent River escapement totaled 44,578 sockeye salmon, slightly below the 50,000 fish minimum goal.

The remaining principle stocks of sockeye salmon (Kenai, Kasilof and Susitna rivers) were expected to provide the bulk of the forecast harvest of 3.2 million fish. Fishermen were informed prior to the season that returns to the Susitna were expected to be comparatively weak and that unless early season catches indicated otherwise, the regular period scheduled for July 12 would likely be closed to drift gillnetting in the offshore areas of the Central District. This date was chosen because it appeared most likely to afford substantial benefit to Susitna-bound fish.

The harvest of these stocks began with normal season-opening dates (June 28 in the drift and most set net fisheries and July 1 in the Upper Subdistrict or "east side" set net fishery). A dispute over prices resulted in virtually no effort during the first few periods of the drift gill net fishery although effort returned to normal levels by July 8. Early season catches in all fisheries were

consistent with expected returns. When sockeye salmon escapement into the Kasilof River began exceeding desired rates in early July additional fishing time was permitted on July 5 and 6 for Upper Subdistrict set nets south of mid-Kalifonsky Beach (the Blanchard Line) and in a corresponding three-mile-wide corridor for drift gillnetting. By July 11 the returns had developed sufficiently to identify initial management measures that needed to be implemented - drift catches to date provided no indication that Susitna River run strength was dramatically higher than anticipated. Accordingly, drift gillnetting was closed for the regularly scheduled period on July 12 throughout the Central District except in that portion within the three mile corridor from Ninilchik to Colliers Dock north of the Kenai River.

All areas fished the next scheduled period on Monday, July 15. The drift harvest of 472,000 sockeye salmon was somewhat below expectations given the anticipated run-strength of the Kenai River return. Additional fishing time was permitted from noon Thursday, July 18 until 11:00 P.M. Saturday, July 20 for the Upper Subdistrict set nets south of the Blanchard Line within a half mile of shore to focus further harvest on fish bound for the Kasilof River, where the escapement was proceeding at a rate projected to exceed desired levels.

The regular period scheduled for Friday, July 19 proceeded without restriction and the resulting drift harvest of only 312,000 sockeye salmon strongly indicated that the overall return and the Kenai River return in particular, was below preseason expectations. Fish began entering the Kenai River in earnest on July 17 but daily escapement values remained unimpressive. To further assist Kenai River escapement, the drift and Upper Subdistrict set net fisheries were closed for the regular periods scheduled for July 22 and 26. Although initial escapement levels in the Yentna River were encouraging, the daily levels quickly dropped and in response, the set net fisheries of the Kustatan and Kalgin Island Subdistricts and the Northern District were added to the July 26 closure. To further protect remaining Yentna-bound sockeye salmon, the Northern District closure was extended to include the July 29 period.

By late July, the escapement in the Kasilof River was approaching the upper end of the goal range and additional fishing time was opened for both set and drift gear along the east side south of the Blanchard Line on July 31 and August 1. As the Kenai River escapement passed into the middle of the desired range, the area open was extended to all Upper Subdistrict set nets and the drift corridor extended northward to Colliers Dock on August 1 and fishing continued in these areas through August 5. Additional fishing time was also allowed for set nets in the Kalgin Island Subdistrict from July 31 through August 5 to take advantage of a strong return of sockeye salmon returning to Packers Creek.

The delayed effective date (July 21) of the new regulations resulted in a less effective commercial fishery in Knik Arm near the terminus of Fish Creek. Only two fishing periods were permitted, July 21 and 23, and the harvest of 10,500 sockeye salmon was by far the smallest harvest in the fishery since it's inception. A total of twenty-three permit holders participated in the Knik Arm fishery.

The success of the management strategies employed in the various sockeye salmon fisheries was generally good as measured by escapement levels in the managed

systems. The Kenai River escapement of 647,597 was within the desired range of 400,000 to 700,000. The peak day of passage past the sonar counters was July 28 (59,012) and the 50% point was reached on July 27. The Kasilof River escapement of 238,269 was also within the desired range (150,000 - 250,000). The peak daily passage occurred on July 18 and the 50% point reached on July 15. The Yentna River escapement of 109,632 was within the desired range of 100,000 to 150,000. The peak daily count occurred on July 22 while the 50% point was achieved on July 26. The Crescent River escapement of 44,578 fell slightly short of the 50,000 minimum goal but given the extreme weakness of this return and the prompt action taken to close the nearby fishery, little more could have been done to improve the final escapement figure. The peak day of escapement into the Crescent occurred on July 18 and the 50% point was reached three days later. The 50,000 fish point escapement goal for Fish Creek was exceeded by 9,195 and was held in check largely as the result of the personal use dip net fishery that occurred instream. The peak daily weir count (14,464) occurred on July 28, five days after reaching the 50% point. The escapement goal range of 15,000 - 25,000 for Packers Creek was substantially exceeded with a final count of 41,275. The Cook Inlet Aquaculture Association was permitted to make cost recovery efforts when it became apparent that the 25,000 level would be exceeded but these efforts were only marginally successful. The peak daily weir count on Packers Creek (3,482 on August 2) coincided with the 50% point of the season's total.

Chum Salmon

Chum salmon returning to Upper Cook Inlet are bound principally for the Susitna River with much smaller returns bound for several streams in Knik and Turnagain Arms and along the west side of the Central District. The harvest occurs primarily in the drift fishery (87%), the Northern District set net fishery (6%) and the Central District west side set net fishery (6%). The timing of the Susitna River return significantly overlaps the timing of the sockeye salmon returns and as a result, management measures directed at sockeye salmon often influence the chum salmon harvest. The Susitna River chum salmon escapement is not measured and no escapement objectives are defined.

The 1991 harvest of 280,223 chum salmon was less than half the long-term average and accounted for 4% of the exvessel value of the salmon fishery. The drift fishery catch per vessel values confirm a relatively weak return but restrictions imposed to conserve sockeye salmon stocks (the July 22 and 26 drift closures) contributed to reducing the exploitation of the return and a late peak in abundance in early August occurred as drift effort was rapidly declining. The escapement index obtained at the Yentna River sonar site was below average but sonar operations were suspended prior to the likely arrival of the latter portion of the run.

Chum salmon returns to Central District west side streams were also relatively poor and harvests from these areas were well below average. Escapement in the few streams monitored was generally below average.

Pink Salmon

Returns to the Susitna and Kenai rivers combine to account for the majority of the pink salmon production in Upper Cook Inlet. Both rivers have abundant returns only in even-numbered years. Susitna pink salmon return first, passing through the Central District during the latter half of July while Kenai-bound pink salmon are most abundant in the Central District in early August. The harvest occurs principally in the drift fishery (38%), the Central District east side set net fishery (36%) and the Northern District set net fishery (22%).

As with the Susitna chum salmon return, the Susitna pink salmon return overlaps the sockeye salmon return to such a large degree that harvest levels are often influenced by management measures directed at sockeye salmon. Specific fishery alterations directed at Susitna River pink salmon are uncommon. Kenai River pink salmon are harvested most heavily in the Central District east side set fishery in early August. Fishing time in this area after August 5 is typically controlled by the relative strength of the pink salmon return. Estimating the escapement of pink salmon has not proven practical in either system and specific escapement objectives do not exist.

The 1991 pink salmon return produced a harvest of only 14,663 fish, well below average for an odd-numbered year, and was valued at only $5,500. Lack of any directed effort on pink salmon and the late July drift closures contributed to the minimal harvest, although the return was also considerably weaker than normal for an odd-numbered year. No specific management efforts were directed at pink salmon during the course of the 1991 fishery.

Coho Salmon

For discussion purposes, it is useful to divide Upper Cook Inlet's diverse coho salmon stocks impacted by the commercial fishery into three broad categories. The first category contains those stocks bound for the Susitna River and other Northern District streams. These migrate through the Central District during the last three weeks of July. The Cook Inlet Salmon Management Plan identifies Susitna River coho salmon as a stock which should experience a minimized commercial interception, to the extent consistent with other goals established within the Plan. While simple in concept, this directive is much more difficult to implement in practice. The management plan identifies a higher priority for the sustained commercial harvest of sockeye, chum and pink salmon stocks, many of which are bound for the same streams at similar times and along similar pathways utilized by Susitna River coho salmon stocks. Consequently, these stocks are normally exploited at fairly significant levels in the commercial drift and the Northern District set net fisheries. It is occasionally possible to time fishery closures aimed principally at stock conservation of sockeye salmon to take advantage of peaks in abundance of coho salmon but such opportunities arise too infrequently to consistently meet the Plan objectives.

The second category of interest is the early return of coho salmon to the Kenai River which peaks in abundance in early August and is intercepted in both the drift and east side set net fisheries. The allocation status is the same as for Susitna coho salmon. Due to the overlap with the Kenai River sockeye salmon

return, it is difficult to avoid a substantial interception of this stock in the commercial fishery.

The third stock grouping consists of a diverse collection of coho salmon returns to the numerous streams along the west side of Cook Inlet. Under the management plan, these stocks are managed primarily for commercial uses. Fishing time in the west side set net fisheries during August is based primarily on the strength of these returns.

The 1991 coho salmon harvest of 425,724 was somewhat above average and accounted for 13% of the exvessel value of the salmon fishery. Commercial interception of Susitna River coho salmon was significantly reduced by the July 22 and 26 closure of the drift fishery and the closure of the Northern District set net fishery on July 26 and 29. Inriver abundance was not directly measured but appeared to be good to excellent.

The Kenai River early return exhibited good run strength as judged by daily catches in the east side set net fishery and in the corresponding in river recreational fishery where both effort and harvest were at record levels. Relatively few additional fishing periods targeting on sockeye salmon and a later than normal run-timing combined to limit the east side set net harvest of coho salmon to just over 30,000, the smallest harvest in this fishery since 1979.

The west side coho salmon returns were above average and fishing in this area and in the Northern District was opened for an additional day each week beginning in mid August. The harvest in these areas was generally above average.

Chinook Salmon

The principle stocks of chinook salmon harvested in the commercial fishery are the return to the Susitna River and the late run to the Kenai River. Created by the Board five years ago and conducted under the direction of the Susitna River Chinook Salmon Management Plan, a minor fishery occurs each June for set gill nets in the Northern District. Each participant is allowed one 35-fathom net and a minimum distance of 1200 feet must be maintained between nets (twice the normal distance). Fishing is permitted for 6 hours each Monday in June until the quota of 12,500 chinook has been harvested or the regular season opens on June 25. Harvest levels have approached or reached the quota in most years but early closures have generally not been required.

The 1991 Northern District early season fishery harvested 6,305 chinook salmon, the lowest catch since the inception of the fishery and continuing a pattern of declining annual catches. While there are many contributing factors to the small 1991 harvest, the most likely cause of the general decline is a recent reduction in the abundance of chinook salmon in part due to lingering effects of severe flooding in local drainages in the fall of 1986. One-hundred-forty-five permit holders made landings during the fishery.

The other major stock of chinook salmon harvested in the commercial fishery, the late run to the Kenai River, generates the greatest controversy in Upper Cook Inlet, pitting Kenai River recreational anglers against Upper Subdistrict ("east

side") set netters. An average of over 13,000 chinook salmon were taken annually during the 1980's in the commercial set net fishery, frequently exceeding the sport fish harvest. Much smaller numbers are taken in the drift gill net fishery.

The 1991 east side set net fish ticket total of 4,891 chinook salmon was approximately equal to the previous year and considerably below the level of the recent ten-year average. The recent reduction in reported catch most likely reflects somewhat smaller total returns of late-run Kenai River chinook salmon, reduced sockeye salmon returns resulting in less fishing time, continued efforts on the part of set netters to release live chinook salmon encountered in their nets and probably reluctance on the part of some fishermen to report their harvest given the controversy surrounding this fishery.

The harvest was spread fairly evenly over the east side beach areas with Ninilchik (244-21), Cohoe (244-22) and Kalifonsky (244-30) averaging 12, 10 and 11 chinook salmon per permit holder, respectively, while Salamatof Beach permit holders averaged just 6 fish. A total of 158 chinook salmon were reported as retained for personal use by commercial fishermen, 126 of those coming from the east side set net fishery.

Post-Season Perspective

In general, the management strategy employed during the 1991 fishery proved to be very successful. The attainment of the desired sockeye salmon escapement level in the Susitna River was particularly satisfying and underscored the need to continue a conservative approach to the drift gill net harvest just prior to mid-July. Given the outlook for relatively poor returns to the Susitna River in the near future coupled with fairly modest run-strengths expected for the remaining systems, the approach utilized during the 1991 season will likely be similarly employed during coming seasons.

Price, Average Weight and Participation

Prices paid to fishermen for their catch declined significantly from 1990 prices The price per pound for sockeye salmon fell to $1.00, down 55 cents from the previous year (Appendix A.12). Chinook, coho, pink and chum salmon were sold for $1.20, $0.77, $0.12 and $0.35 per pound, respectively. It should be noted that these averages are generated from inseason grounds prices and do not reflect any post-season adjustments.

As determined from fish ticket calculations, the average weight by species did not differ markedly from prior years. Chinook salmon averaged 21.5 pounds per fish while sockeye, coho, pink and chum salmon averaged 5.63, 6.09, 3.11 and 6.56 pounds, respectively (Appendix A.13). The relatively low average weight for sockeye salmon (nearly a pound below the long term average reflects the poor return of five-year-old fish to the Kenai River, normally the largest fish in the harvest.

The Commercial Fisheries Entry Commission issued 582 drift gill net permits

(71.1% to Alaska residents) and 741 set gill net permits (86.8% to Alaska residents) for the Cook Inlet area in 1991 (Appendix A.14). A total of 30 firms or individuals purchased Upper Cook Inlet fishery products during 1991 (Table 13).

Stock Status and Outlook

In general, Upper Cook Inlet's salmon stocks are in excellent condition with several species (sockeye, chum and coho) setting record harvests during the 1980's. While it is difficult to evaluate all of the possible reasons for the generally high production experienced during the last decade, favorable environmental variables undoubtedly played a large part and, unfortunately, are unlikely to be sustained for long.

Recent sockeye salmon production has been particularly vigorous with the eight highest years of production all having occurred in the last nine years. Production peaked in 1987 with a catch of 9.5 million and appears to be trending slowly downward. Despite escapement levels in excess of 1 million in three of the last four years, smolt and fry surveys indicate that Kenai River returns will remain well below recent levels for at least the next four years. Kasilof River returns, very strong through the early and mid 1980's, declined substantially the last few years and should exhibit a generally improving trend over the next several years. Susitna River escapements in several of the recent parent years were significantly below desired levels and returns to this system for the next few years will likely be diminished. Despite very high parent-year escapements, recent production from Crescent River has been poor. The near-term outlook for this system is difficult to project although all recent escapements were in excess of the minimum goal. In summary, Upper Cook Inlet sockeye salmon harvests through the 1990's will likely average less than three million, a significant decline from the 1980's but substantially above the long-term average. For 1992, the expected total return of sockeye salmon is forecast to be 5.1 million and the harvest should equal 3.6 million (Appendix A.15).

Chum salmon production has been highly variable in recent years, in part due to the 1986 flooding of the Susitna Basin. Lacking quantitative escapement information, it is more difficult to speculate on near-term returns but it is likely that chum salmon returns will be fair to good over the next four years. The 1992 harvest projection for chum salmon is 350,000.

Susitna River pink salmon have recovered substantially from the 1986 flood but overall marine survival of pink salmon appears to be waning. Although difficult to evaluate with any surety, the 1992 pink salmon return will most likely be below average with the harvest projected to be 400,000.

Upper Cook Inlet's coho salmon stocks generally produced very strong returns throughout most of the 1980's and no downturn in this trend has been observed. Susitna River escapements have been excellent for the last several years and the outlook for this return is very good. Early-run Kenai River coho salmon returns have ranged from average to good in recent years but harvests have been high in both the commercial fishery and in the rapidly growing sport fishery. The condition of this stock will need to be carefully monitored in the coming years.

The Upper Cook Inlet commercial harvest for 1992 is projected to be 400,000.

All chinook salmon stocks in Upper Cook Inlet appear to be in generally good condition with the exception of several river systems immediately south and west of the Susitna River. These systems apparently sustained substantial damage during the 1986 flooding and returns will likely be below average for the next couple of years. The 1992 projected Upper Cook Inlet commercial chinook salmon harvest is 20,000.

1991 COMMERCIAL HERRING FISHERY

The declining trend in herring harvests in recent years in Upper Cook Inlet waters continued in 1991 with a total harvest of just 30.7 tons. This is the lowest harvest since 1977, which was prior to the development of the sac-roe fishery on the west side of Cook Inlet in Tuxedni and Chinitna bays. The fish appeared to have a later run-timing than normal which was also apparent in the 1990 fishery.

Eastside

The first landing of herring from the eastside bait fishery occurred on May 5, nearly three weeks after the opening of the season. The daily harvests in this fishery remained well below levels seen in recent years, indicating that this stock was much weaker than expected or was exhibiting extremely late run timing. Harvests from May 9 to May 22 averaged just 1,000 to 2,000 pounds per day, very poor for this time period. On May 23 processor reports indicated no significant increase in herring harvests. This lack of abundance could no longer be explained by late run timing alone and an emergency order was issued on May 23 closing the fishery at 3:00 P.M. May 24, to protect the remaining portion of the herring biomass. The total harvest for the entire east side fishery was 13.4 tons (Appendix A.9). This was much lower than the preseason expectation of 50-100 tons for this area and was the lowest harvest in this fishery since 1978. Both fishing effort and reported harvests were concentrated in the Ninilchik beach area, (Statistical Area 244-21) accounting for approximately 60 percent of the harvest and effort. A total of 33 permit holders were active in this fishery making 100 landings. The total exvessel value of this fishery is estimated at 9,500 dollars. The harvest was predominately age 6 (34%) and age 7 (37%) fish (Table 14).

Chinitna Bay

The fishery in Chinitna Bay generally begins by early May and is over by mid May. In 1991 minor harvests of 100 to 300 pounds per day were reported beginning on May 10. These fish were not ripe, averaging less than 3 percent mature roe and were not purchased by any of the processors on the grounds. The first reported delivery from this area was 1,000 pounds on May 21. There was no harvest on May 22 due to extreme winds in the area. A slight increase in abundance was reported on May 23, although insufficient to warrant further harvests on this stock. The area was closed effective 3:00 P.M. May 24. The total reported harvest from this area is 15.7 tons, the lowest reported harvest in this fishery since it's inception in 1978. The actual harvest including fish that were discarded is estimated at 20 to 25 tons, approximately 50 percent of the preseason expectation. A total of 9 permit holders were active in this fishery making 15 landings. The total exvessel value of this fishery is estimated at 11,000 dollars. The age composition of the harvest was dominated by age 6, (27%) age 7 (41 %) and age 8 (14%) fish (Table 15). Roe percentages averaged 11% for those fish that were purchased.

Tuxedni Bay

The fishery in Tuxedni Bay has been in a state of decline since 1987 and this decline continued in 1991. The total reported harvest in Tuxedni Bay was 1.6 tons from deliveries made on May 24. This area was closed along with the remainder of Upper Cook Inlet at 3:00 P.M. on May 24 to protect the remaining portion of the biomass. This was the latest run timing and smallest harvest since the inception of commercial herring fishing in this area. The age composition of the 1991 harvest was primarily age 6 (30%) and age 7 (45%) fish (Table 16). The Tuxedni Bay stocks appear to be in a depressed condition which will warrant additional conservation measures in 1992.

COMMERCIAL RAZOR CLAM FISHERY

The commercial razor clam fishery in Upper Cook Inlet has no closed season and no overall harvest limits. The 1991 fishery got started in late May with the first deliveries being made on May 24. The last reported deliveries in this fishery were made on August 14. The season's harvest of 201,320 pounds was taken primarily from the Polly Creek area and is the lowest harvest in this fishery since 1980. A total of 24 diggers made 1,069 landings over the course of the season. Diggers were paid $.46 per pound for their harvest making the total fishery exvessel value $92,600. Tide tables covering the 1991 fishery can be found in Table 17.

All clams harvested in this fishery are directed by regulation to be sold for human consumption, except for the small percentage of broken clams sold for bait.

SUBSISTENCE AND PERSONAL USE FISHERIES

The subsistence fishery in Upper Cook Inlet received a great deal of attention during the 1991 season. The Board of Fisheries convened two separate meetings (December 1990 and May 1991) to promulgate subsistence regulations in Upper Cook Inlet. In addition the board modified existing personal use fisheries to minimize the impacts of these newly expanded subsistence fisheries. During the course of the 1991 fishing season three Superior Court rulings affecting the subsistence fishery were handed down. These rulings reduced the thirty-three scheduled subsistence periods to just five, allowed two separate personal use fisheries to take place and resulted in a great deal of public confusion concerning these fisheries.

Upper Cook Inlet Subsistence Fishery

Under the regulations promulgated by the board, subsistence fishing would be allowed with 10 fathom set gill nets in most marine water areas of Upper Cook Inlet normally open to commercial set gill net fishing. In addition set net fisheries were created in the Knik Arm as well as dip net fisheries in the mouths of the Kenai and Kasilof Rivers. Subsistence periods were scheduled on select Wednesdays and Saturdays from 8:00 a.m. to 8:00 p.m. by regulation.

Due to the delays in review of the regulations in the Department of Law, emergency regulations were issued on May 20 by Commissioner Rosier implementing the personal use and subsistence regulations as adopted by the board for the 1991 fishing season. Under these emergency regulations the first subsistence fishery took place on May 25 with minor harvests of 1,293 salmon being reported.

On May 30, prior to the second scheduled period the emergency regulations issued by Commissioner Rosier were ruled invalid by Judge Cranston in the Kenai Superior Court. This injunction prevented all regulations covering the Upper Cook Inlet area which were implemented by emergency regulation from being utilized. Fisheries management reverted to the 1990 regulations during this period until the new regulations were reviewed by the Department of Law and signed into law by the Lieutenant Governor. The board regulations were signed by the Lieutenant Governor on June 20, and took effect 30 days later after public review, on July 21.

The second scheduled subsistence fishery took place on July 24. Effort levels and harvests increased dramatically. Late in the day on July 24 Judge Cranston issued a Temporary Restraining Order (TRO), effective until August 3, enjoining the Department from conducting a subsistence fishery if the resource could not sustain a commercial fishery in the regularly scheduled period prior to the scheduled subsistence fishery. Under this TRO all subsistence fisheries on July 27 in Upper Cook Inlet were closed by emergency order. On July 29 the minimum escapement goals in both the Kenai and Kasilof Rivers were reached and the regular commercial period in the Central District on July 29 was allowed to take place. The Northern District remained closed for this July 29 period to ensure attainment of the sockeye salmon escapement goal in the Susitna River.

The next scheduled subsistence fishery on July 31 was allowed in the Central District however the Northern District was again closed by emergency order. On August 3 all regularly scheduled subsistence fisheries took place. By regulation the August 7 subsistence period included only dip net fisheries in the Kenai and Kasilof River mouths.

On August 9 Judge Cranston invalidated the Upper Cook Inlet Subsistence Salmon Management Plan, eliminating any further subsistence fisheries in Upper Cook Inlet conducted under this plan. A total of five days of subsistence fishing were conducted under this plan, however not all areas were open each of these periods. The Central District subsistence set net sockeye harvest was 721 on May 25, 16,054 on July 24, 1,450 on July 31 and 1,247 on August 3. The Northern District set net sockeye harvest was 54 on May 25, 1,136 on July 24 and 193 on August 3. The dip net sockeye harvest in the Kenai River was 240 on May 25, 7,949 on July 24, 1,639 on July 31, 389 on August 3 and 251 on August 7. The dip net sockeye harvest in the Kasilof River was 24 on May 25, 692 on July 24, 126 on July 31, 40 on August 3 and 25 on August 7. The remaining subsistence periods, 5 in June, 7 in July, 7 in August and 8 in September were closed by court action. In total, the 7,065 holders of Upper Cook Inlet subsistence permits issued under the newly-adopted management plan reported harvesting 550 chinook, 32,230 sockeye, 3,520 coho, 537 pink and 1,598 chum salmon (Table 18).

The Kenaitze Tribal Fishery

This fishery granted to the Kenaitze tribe under a consent preliminary injunction issued in 1989 from the U.S. District Court was continued for 1990 by a second injunction. A third injunction, slightly modified from the 1989 and 1990 injunctions, was granted in 1991 after the Superior Court ruled that the emergency regulations as enacted by the department were invalid. Under the terms of the injunction, the Kenaitze Tribe was issued a single permit allowing the bearer, who must be a tribal member domiciled in Game Management Units 7 or 15 (the Kenai Peninsula), to operate a single 10-fathom set gill net having a mesh size no greater than 8.5 inches in the Kenai River downstream from a point one-quarter mile above the Warren Ames Bridge and including those marine waters adjacent to the river mouth normally closed to commercial salmon fishing. Fishing was permitted each day on a 24-hour basis from June 1 to September 1 and from September 16 to September 30. Fishing was to cease when a total of 5,000 salmon had been harvested. A total harvest quota of 300 chinook salmon was also in effect after which all chinook would be released alive. A third provision of this permit allowed for a harvest quota of no more than 500 coho salmon taken after September 15.

Fishing occurred primarily in marine waters south of the mouth of the Kenai River and occasionally in an area known as the "Birches", a prominent stand of birch trees on the south bank of the river immediately upstream of the Warren Ames Bridge. The harvest, as reported by the tribal office, totaled 34 chinook salmon, 2,965 sockeye, 4 pink and a total of 1,945 coho, however only 404 coho were harvested after September 15.

Tyonek Subsistence Salmon Fishery

Created by court order in 1980, this fishery was originally open only to those individuals domiciled in the village of Tyonek but recent court decisions allow any Alaska resident to participate although very few non-villagers seek permits. Only one permit is allowed per household and each permit holder is allowed a single ten-fathom net having a mesh size no greater than six inches. Fishing periods are open from 4:00 a.m. to 8:00 p.m. each Tuesday, Thursday and Friday from May 15 to June 15 and from 6:00 a.m. to 6:00 p.m. each Saturday after June 15. The 1991 season resulted in a total reported harvest of 842 chinook, 20 sockeye and 72 coho (Stanek, ADF&G, memorandum). The chinook harvest has declined steadily since 1983 when the harvest peaked at 2,755. Fifty-one permits were issued for the early season (Appendix A.16).

Kasilof Personal Use Gill Net Fishery

The Kasilof River personal use gill net fishery was established by the Alaska Board of Fisheries in 1982. Under regulations adopted for this fishery, open fishing periods are set at 6:00 a.m. to 6:00 p.m. daily beginning June 21. Fishing is limited to the beaches adjacent to the mouth of the Kasilof River inside the ADF&G commercial salmon fishing regulatory markers. Participants are permitted a single 10-fathom gill net having a mesh size no greater than six inches and a depth no greater than forty-five meshes. Participants are required to have a current Alaska resident sport fishing license. The fishery is limited to a harvest of 5,000-10,000 sockeye salmon.

In 1991, as in prior years, daily net counts were made at each beach and on-site interviews with fishermen were conducted to determine an average catch per net for both sockeye and chinook salmon. Daily harvest estimates were based on the average catch per net multiplied by the total number of nets fishing.

The fishery was open for four days before achieving the sockeye salmon quota and was closed by emergency order at 6:00 p.m., June 24. The final harvest was estimated to be 8,380 sockeye and 34 chinook salmon (Table 19). Effort levels remained fairly constant with an average of 117 nets per day. The highest daily harvest occurred on June 23, when 2,557 sockeye salmon were taken in 130 nets. In general, sockeye fishing improved throughout the course of the fishery. Chinook salmon harvests declined rapidly after the first day of the fishery.

Fall Personal Use Coho Salmon Fishery

The Central and Northern Districts Personal Use Coho Salmon Management Plan was adopted by the Alaska Board of Fisheries in 1983. Open fishing periods are scheduled from 12:00 noon, Saturday until 12:00 noon, Sunday on the last three weekends of September or until 2,500 salmon have been taken; open areas are defined as all areas along the Kenai Peninsula shoreline normally open to commercial set gillnetting from the Kasilof River north to Point Possession. Each permit holder is allowed one 10-fathom set gill net with a mesh size no greater than six inches and not exceeding 45 meshes in depth. A minimum distance of 100 feet is required between nets. A current Alaska resident sportfishing

license and a permit issued by the Soldotna ADF&G office are required prior to participation in the fishery. Permit holders are required to report their catch to the Soldotna office within five days of a fishing period in which they participate.

A total of 360 permits were issued for the 1991 fishery. Aerial surveys were conducted each weekend to determine the total number of nets fishing and catch reports received in the Soldotna office from fishermen were used to calculate an average catch per net. Harvest estimates for each fishing period were generated by multiplying the average catch per net by the total number of nets fishing (Table 20).

The first weekend (September 14-15) generated an estimated harvest of 1,168 coho salmon from 155 nets for an average per net of 7.5 fish. The second weekend saw a slight decrease in effort to 147 nets. However the catch per net increased to 10.4 fish resulting in an estimated harvest of 1,535. With the cumulative harvest at 2,703, 203 fish in excess of the regulatory quota of 2,500, the last scheduled weekend of the fishery was closed by emergency order.

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Table 1. Offshore sockeye salmon test fishing observations, F/V *Corrina Kay*, 1991.[1]

DATE	NUMBER OF STATIONS	FISHING TIME (min)	CATCH	CUMULATIVE CATCH	INDEX	CUMULATIVE INDEX	MEAN LENGTH (mm)	MEAN WEIGHT (kgs)	WATER TEMP (c)	AIR TEMP (c)	SALINITY (ppm)	BEGINNING WIND VEL	BEGINNING WIND DIR	ENDING WIND VEL	ENDING WIND DIR
7/01	5	195.5	50	50	35.160	35.160	539.	.00	9.7	10.0	14.2	6	S	10	SW
7/02	4	131.5	16	66	12.039	47.199	510.	.00	9.0	9.8	13.6	3	S	3	SE
7/03	5	186.0	8	74	5.640	52.839	525.	.00	10.0	11.2	15.1	15	S	18	S
7/04	5	188.5	26	100	20.273	73.112	515.	.00	9.6	8.6	15.0	16	SE	17	S
7/05	5	186.0	33	133	26.152	99.264	524.	.00	10.0	10.6	13.8	1	SW	2	SW
7/06	5	190.5	46	179	35.710	134.974	522.	.00	10.2	10.2	13.8	0		2	NE
7/07	5	188.5	43	222	34.209	169.183	524.	.00	8.8	12.0	15.9	0		3	S
7/08	5	186.5	34	256	26.880	196.063	529.	.00	8.9	9.0	16.4	10	SE	7	S
7/09	5	189.5	62	318	48.160	244.223	547.	.00	9.0	10.0	16.3	13	NE	5	SW
7/10	5	186.5	35	353	26.683	270.906	522.	.00	9.9	9.4	14.9	11	S	0	
7/11	5	204.5	163	516	108.090	378.996	545.	.00	9.1	10.8	15.2	0		1	NW
7/12	5	188.5	76	592	55.745	434.741	546.	.00	9.1	9.4	15.3	0		0	
7/13	5	217.5	234	826	146.420	581.161	558.	.00	9.4	10.2	15.4	5	S	8	SE
7/14	5	180.0	34	860	25.150	606.311	556.	.00	9.2	10.2	15.1	9	S	7	S
7/15	5	230.0	455	1315	232.360	838.671	564.	.00	10.0	12.6	13.4	6	SE	3	SE
7/16	5	195.0	97	1412	71.610	910.281	556.	.00	9.6	9.4	13.6	5	NE	2	NE
7/17	5	187.5	20	1432	15.700	925.981	557.	.00	9.6	10.4	13.6	10	S	18	SE
7/18	5	196.0	136	1568	96.830	1022.811	562.	.00	10.0	10.6	12.9	5	N	10	SW
7/19	5	192.5	50	1618	37.949	1060.760	551.	.00	10.0	13.2	14.3	7	S	2	SE
7/20	5	180.0	117	1735	75.937	1136.697	550.	.00	10.1	10.6	12.3	0		3	SE
7/21	5	200.0	50	1785	35.840	1172.537	564.	.00	10.6	11.8	12.1	0		0	
7/22	5	200.0	125	1910	80.780	1253.317	573.	.00	10.6	12.2	13.3	0		0	
7/23	5	194.5	61	1971	41.702	1295.019	548.	.00	10.5	11.6	10.7	18	NW	13	NE
7/24	5	178.0	6	1977	5.040	1300.059	555.	.00	11.0	10.4	10.1	12	NW	20	NW
7/25	5	191.5	52	2029	37.342	1337.401	586.	.00	10.2	13.6	9.6	0		0	
7/26	5	192.5	37	2066	25.873	1363.274	0.	.00	10.8	12.4	9.8	4	S	0	
7/27	5	191.5	141	2207	84.380	1447.654	565.	.00	10.3	14.0	9.7	7	SE	4	SE
7/28	3	110.5	28	2235	21.144	1468.798	557.	.00	10.7	12.3	9.7	2	S	15	S
7/29	5	202.6	152	2387	93.487	1562.285	565.	.00	10.7	11.8	8.7	15	SW	11	SW
7/30	5	157.5	14	2401	11.830	1574.115	572.	.00	10.4	9.6	8.7	4	N	0	

[1] From Tarbox and King (1992)

Table 2. Upper Cook Inlet sockeye salmon escapement by river and date, 1991.

Date	KENAI RIVER daily	KENAI RIVER cumulative	KASILOF RIVER daily	KASILOF RIVER cumulative	CRESCENT RIVER daily	CRESCENT RIVER cumulative	YENTNA RIVER daily	YENTNA RIVER cumulative	FISH CREEK daily	FISH CREEK cumulative	PACKERS CREEK daily	PACKERS CREEK cumulative
5-28 Tue											1	1
5-29 Wed											0	1
5-30 Thu											0	1
5-31 Fri											0	1
6-01 Sat											0	1
6-02 Sun											0	1
6-03 Mon											0	1
6-04 Tue											6	7
6-05 Wed											6	13
6-06 Thu											0	13
6-07 Fri											0	13
6-08 Sat											0	13
6-09 Sun											35	48
6-10 Mon											31	79
6-11 Tue											15	94
6-12 Wed											72	166
6-13 Thu											95	261
6-14 Fri											40	301
6-15 Sat			496	496							34	335
6-16 Sun			1,588	2,084							56	391
6-17 Mon			1,415	3,499							299	690
6-18 Tue			1,109	4,608							107	797
6-19 Wed			1,552	6,160							3	800
6-20 Thu			1,587	7,747							118	918
6-21 Fri			2,683	10,430							232	1,150
6-22 Sat			2,920	13,350							93	1,243
6-23 Sun			3,300	16,650							363	1,606
6-24 Mon			3,614	20,264							220	1,826
6-25 Tue			2,553	22,817							430	2,256
6-26 Wed			3,419	26,236	82	82					683	2,939
6-27 Thu			5,951	32,187	92	174					263	3,202
6-28 Fri			8,585	40,772	101	275					0	3,202
6-29 Sat			7,814	48,586	171	446					247	3,449
6-30 Sun			8,112	56,698	147	593					97	3,546
7-01 Mon	970	970	5,103	61,801	178	771					315	3,861
7-02 Tue	820	1,790	3,797	65,598	607	1,378					340	4,201
7-03 Wed	681	2,471	4,314	69,912	79	1,457					202	4,403
7-04 Thu	1,048	3,519	10,575	80,487	345	1,802					126	4,529
7-05 Fri	4,558	8,077	11,348	91,835	935	2,737					67	4,596
7-06 Sat	3,267	11,344	3,459	95,294	52	2,789					282	4,878
7-07 Sun	809	12,153	1,542	96,836	79	2,868	49	49			460	5,338
7-08 Mon	776	12,929	2,508	99,344	643	3,511	62	111			302	5,640

Table 2. (Page 2 of 3)

Date	KENAI RIVER daily	KENAI RIVER cumulative	KASILOF RIVER daily	KASILOF RIVER cumulative	CRESCENT RIVER daily	CRESCENT RIVER cumulative	YENTNA RIVER daily	YENTNA RIVER cumulative	FISH CREEK daily	FISH CREEK cumulative	PACKERS CREEK daily	PACKERS CREEK cumulative
7-09 Tue	1,133	14,062	3,304	102,648	494	4,005	31	142	14	14	89	5,729
7-10 Wed	1,692	15,754	4,683	107,331	113	4,118	34	176	14	28	157	5,886
7-11 Thu	2,601	18,355	6,388	113,719	351	4,469	33	209	6	34	128	6,014
7-12 Fri	3,918	22,273	2,627	116,346	1,355	5,824	35	244	0	34	299	6,313
7-13 Sat	1,760	24,033	322	116,668	550	6,374	54	298	2	36	70	6,383
7-14 Sun	881	24,914	461	117,129	2,023	8,397	50	348	128	164	115	6,498
7-15 Mon	1,689	26,603	3,919	121,048	2,509	10,906	80	428	447	611	194	6,692
7-16 Tue	3,384	29,987	3,574	124,622	2,112	13,018	95	523	547	1,158	598	7,290
7-17 Wed	7,897	37,884	5,538	130,160	2,816	15,834	58	581	350	1,508	279	7,569
7-18 Thu	17,703	55,587	16,463	146,623	3,119	18,953	407	988	282	1,790	333	7,902
7-19 Fri	32,673	88,260	8,128	154,751	1,618	20,571	2,057	3,045	113	1,903	0	7,902
7-20 Sat	37,298	125,558	2,862	157,613	1,580	22,151	7,905	10,950	3,319	5,222	221	8,123
7-21 Sun	20,425	145,983	4,150	161,763	1,192	23,343	10,183	21,133	4,671	9,893	595	8,718
7-22 Mon	23,098	169,081	7,362	169,125	2,588	25,931	11,985	33,118	12,241	22,134	673	9,391
7-23 Tue	30,185	199,266	9,743	178,868	2,988	28,919	8,301	41,419	10,074	32,208	548	9,939
7-24 Wed	44,419	243,685	7,169	186,037	1,767	30,686	5,201	46,620	5,741	37,949	523	10,462
7-25 Thu	31,173	274,858	7,660	193,697	1,304	31,990	2,790	49,410	162	38,111	819	11,281
7-26 Fri	33,725	308,583	8,493	202,190	1,572	33,562	5,946	55,356	210	38,321	683	11,964
7-27 Sat	45,157	353,740	7,617	209,807	2,138	35,700	7,682	63,038	61	38,382	959	12,923
7-28 Sun	59,012	412,752	7,877	217,684	1,571	37,271	6,754	69,792	14,464	52,846	1,547	14,470
7-29 Mon	47,676	460,428	5,208	222,892	1,330	38,601	4,149	73,941	1,323	54,169	1,558	16,028
7-30 Tue	39,747	500,175	2,855	225,747	846	39,447	5,015	78,956	2	54,171	1,457	17,485
7-31 Wed	42,451	542,626	2,021	227,768	1,403	40,850	3,690	82,646	0	54,171	893	18,378
8-01 Thu	30,802	573,428	905	228,673	2,214	43,064	2,761	85,407	82	54,253	1,107	19,485
8-02 Fri	17,349	590,777	1,524	230,197	533	43,597	2,940	88,347	3,607	57,860	3,482	22,967
8-03 Sat	9,687	600,464	1,659	231,856	248	43,845	4,802	93,149	97	57,957	1,138	24,105
8-04 Sun	4,093	604,557	1,087	232,943	164	44,009	4,554	97,703	223	58,180	728	24,833
8-05 Mon	3,623	608,180	884	233,827	215	44,224	4,268	101,971	44	58,224	344	25,177
8-06 Tue	4,209	612,389	1,404	235,231	181	44,405	1,269	103,240	78	58,302	366	25,543
8-07 Wed	4,866	617,255	1,676	236,907	173	44,578	1,898	105,138	150	58,452	588	26,131
8-08 Thu	8,685	625,940	1,362	238,269			1,737	106,875	221	58,673	918	27,049
8-09 Fri	8,170	634,110					1,227	108,102	88	58,761	883	27,932
8-10 Sat	5,665	639,775					902	109,004	78	58,839	1,556	29,488
8-11 Sun	4,393	644,168					471	109,475	82	58,921	994	30,482
8-12 Mon	3,429	647,597					157	109,632	5	58,926	517	30,999
8-13 Tue									93	59,019	1,143	32,142
8-14 Wed									53	59,072	255	32,397
8-15 Thu									44	59,116	713	33,110
8-16 Fri									14	59,130	213	33,323
8-17 Sat									16	59,146	665	33,988
8-18 Sun									16	59,162	705	34,693
8-19 Mon									33	59,195	229	34,922

Table 2. (Page 3 Of 3)

Date	KENAI RIVER daily	KENAI RIVER cumulative	KASILOF RIVER daily	KASILOF RIVER cumulative	CRESCENT RIVER daily	CRESCENT RIVER cumulative	YENTNA RIVER daily	YENTNA RIVER cumulative	FISH CREEK daily	FISH CREEK cumulative	PACKERS CREEK daily	PACKERS CREEK cumulative
8-20 Tue									11	59,206	120	35,042
8-21 Wed									10	59,216	150	35,192
8-22 Thu									18	59,234	365	35,557
8-23 Fri									7	59,241	153	35,710
8-24 Sat									6	59,247	344	36,054
8-25 Sun									5	59,252	419	36,473
8-26 Mon									3	59,255	186	36,659
8-27 Tue									4	59,259	325	36,984
8-28 Wed									3	59,262	267	37,251
8-29 Thu									0	59,262	361	37,612
8-30 Fri									1	59,263	153	37,765
8-31 Sat									2	59,265	21	37,786
9-01 Sun									1	59,266	123	37,909
9-02 Mon									3	59,269	294	38,203
9-03 Tue									0	59,269	280	38,483
9-04 Wed									0	59,269	168	38,651
9-05 Thu									0	59,269	281	38,932
9-06 Fri									0	59,269	345	39,277
9-07 Sat									0	59,269	183	39,460
9-08 Sun									0	59,269	366	39,826
9-09 Mon									0	59,269	293	40,119
9-10 Tue									0	59,269	453	40,572
9-11 Wed									0	59,269	153	40,725
9-12 Thu									0	59,269	18	40,743
9-13 Fri											21	40,764
9-14 Sat											7	40,771
9-15 Sun											1	40,772
9-16 Mon											307	41,079
9-17 Tue											9	41,088
9-18 Wed											17	41,105
9-19 Thu											28	41,133
9-20 Fri											16	41,149
9-21 Sat											6	41,155
9-22 Sun											10	41,165
9-23 Mon											32	41,197
9-24 Tue											20	41,217
9-25 Wed											26	41,243
9-26 Thu											22	41,265
9-27 Fri											10	41,275
TOTAL		647,597		238,269		44,578		109,632		59,269		41,275

Table 3. Commercial salmon catch by area and gear type, Upper Cook Inlet, 1991.

Area/Gear	Chinook	Sockeye	Coho	Pink	Chum	Total
DRIFT	241	1,117,514	175,504	5,791	215,469	1,514,519
CENTRAL SET						
Upper	4,891	844,156	30,435	2,670	2,387	884,539
Kalgin Island	68	63,534	49,572	585	3,365	117,124
Kustatan	922	16,666	16,733	60	211	34,592
Western	552	17,195	18,361	168	4,455	40,731
Chinitna Bay	2	2,310	2,849	236	14,943	20,340
Subtotal	6,435	943,861	117,950	3,719	25,361	1,097,326
NORTHERN SET						
Eastern	1,109	34,292	27,374	930	4,531	68,236
General	5,750	81,909	104,896	4,223	34,862	231,640
Subtotal	6,859	116,201	132,270	5,153	39,393	299,876
SEINE	0	0	0	0	0	0
GRAND TOTAL	13,535	2,177,576	425,724	14,663	280,223	2,911,721

Table 4. Sockeye salmon catch by area and date, Upper Cook Inlet, 1991.

	DRIFT excluding CHINITNA		EAST SIDE SET NET																NORTHERN DISTRICT SET NET			
			SALAMATOF		K-BEACH		COHOE/NINILCHIK		TOTAL		WESTERN		KUSTATAN		KALGIN		CHINITNA		WEST SIDE		EAST SIDE	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
5-27													91	91								
5-31													551	642								
6-03													967	1,609					373	373	514	514
6-07													3,243	4,852						373		514
6-10													3,235	8,087					713	1,086	276	790
6-14													2,124	10,211						1,086		790
6-17											1,562	1,562	1,376	11,587					786	1,872	579	1,369
6-21											851	2,413	108	11,695						1,872		1,369
6-24											902	3,315	114	11,809					291	2,163	170	1,539
6-28	1,730	1,730									827	4,142	98	11,907	2,876	2,876	423	423	185	2,348	337	1,876
7-01	6,540	8,270	999	999	9,476	9,476	16,158	16,158	26,633	26,633	2,014	6,156	58	11,965	880	3,756	425	848	269	2,617	541	2,417
7-05	6,135	14,405	3,674	4,673	8,149	17,625	16,735	32,893	28,558	55,191	2,194	8,350	378	12,343	1,773	5,529	117	965	569	3,186	1,533	3,950
7-06	590	14,995		4,673	1,732	19,357	12,856	45,749	14,588	69,779		8,350		12,343		5,529		965		3,186		3,950
7-08	176,765	191,760	2,379	7,052	3,150	22,507	11,406	57,155	16,935	86,714	2,336	10,686	60	12,403	1,553	7,082	251	1,216	274	3,460	327	4,277
7-12	1,625	193,385	2,624	9,676	9,515	32,022	22,385	79,540	34,524	121,238		10,686	314	12,717	1,028	8,110	297	1,513	745	4,205	2,168	6,445
7-15	471,862	665,247	11,209	20,885	30,058	62,080	38,281	117,821	79,548	200,786		10,686	331	13,048	1,721	9,831	209	1,722	1,789	5,994	1,181	7,626
7-18		665,247		20,885	27,806	89,886	90,885	208,706	118,691	319,477		10,686		13,048		9,831		1,722		5,994		7,626
7-19	311,515	976,762	59,327	80,212	72,206	162,092	86,999	295,705	218,532	538,009		10,686	1,313	14,361	7,088	16,919	16	1,738	39,284	45,278	12,871	20,497
7-20		976,762		80,212	16,055	178,147	34,328	330,033	50,383	588,392		10,686		14,361		16,919		1,738		45,278		20,497
7-21		976,762		80,212		178,147		330,033		588,392		10,686		14,361		16,919		1,738	5,319	50,597		20,497
7-22		976,762		80,212		178,147		330,033		588,392		10,686	415	14,776	2,754	19,673	139	1,877	16,006	66,603	8,215	28,712
7-23		976,762		80,212		178,147		330,033		588,392		10,686		14,776		19,673		1,877	5,140	71,743		28,712
7-26		976,762		80,212		178,147		330,033		588,392		10,686		14,776		19,673	78	1,955		71,743		28,712
7-29	55,826	1,032,588	42,689	122,901	17,539	195,686	17,855	347,888	78,083	666,475		10,686	292	15,068	8,486	28,159	66	2,021		71,743		28,712
7-31	7,679	1,040,267		122,901	4,548	200,234	9,161	357,049	13,709	680,184		10,686		15,068	6,606	34,765		2,021		71,743		28,712
8-01	15,633	1,055,900	23,606	146,507	9,356	209,590	10,031	367,080	42,993	723,177		10,686		15,068	6,852	41,617		2,021		71,743		28,712
8-02	26,327	1,082,227	21,309	167,816	13,597	223,187	16,728	383,808	51,634	774,811	2,385	13,071	255	15,323	7,053	48,670	64	2,085	4,886	76,629	2,528	31,240
8-03	1,043	1,083,270	6,202	174,018	5,271	228,458	6,505	390,313	17,978	792,789		13,071		15,323	1,384	50,054		2,085		76,629		31,240
8-04	235	1,083,505	7,587	181,605	4,271	232,729	3,606	393,919	15,464	808,253		13,071		15,323	1,611	51,665		2,085		76,629		31,240
8-05	24,186	1,107,691	10,813	192,418	5,166	237,895	2,638	396,557	18,617	826,870	980	14,051	71	15,394	1,856	53,521	36	2,121	1,606	78,235	562	31,802
8-09	5,264	1,112,955	5,060	197,478	2,144	240,039	2,197	398,754	9,401	836,271	569	14,620	82	15,476	2,662	56,183	7	2,128	999	79,234	527	32,329
8-12	2,758	1,115,713	4,147	201,625	2,009	242,048	1,729	400,483	7,885	844,156	1,069	15,689	117	15,593	2,819	59,002	35	2,163	292	79,526	424	32,753
8-16	369	1,116,082		201,625		242,048		400,483		844,156	299	15,988	515	16,108	1,113	60,115	76	2,239	468	79,994	355	33,108
8-19	474	1,116,556		201,625		242,048		400,483		844,156	220	16,208	117	16,225	919	61,034	64	2,303	351	80,345	288	33,396
8-21	417	1,116,973		201,625		242,048		400,483		844,156	143	16,351	223	16,448	641	61,675		2,303	537	80,882	257	33,653
8-23	397	1,117,370		201,625		242,048		400,483		844,156	287	16,638	70	16,518	548	62,223	1	2,304	707	81,589	174	33,827
8-26	97	1,117,467		201,625		242,048		400,483		844,156	165	16,803	16	16,534	573	62,796	3	2,307	170	81,759	107	33,934
8-28	43	1,117,510		201,625		242,048		400,483		844,156	316	17,119	44	16,578	358	63,154		2,307	88	81,847	228	34,162
8-30		1,117,510		201,625		242,048		400,483		844,156	25	17,144	38	16,616	119	63,273	6	2,313	2	81,849	74	34,236
9-02		1,117,510		201,625		242,048		400,483		844,156	17	17,161	1	16,617	172	63,445		2,313	51	81,900	17	34,253
9-04		1,117,510		201,625		242,048		400,483		844,156	4	17,165	2	16,619	37	63,482		2,313	1	81,901	13	34,266
9-06		1,117,510		201,625		242,048		400,483		844,156	25	17,190	47	16,666	27	63,509	1	2,314	8	81,909	16	34,282
9-09		1,117,510		201,625		242,048		400,483		844,156	4	17,194		16,666		63,509		2,314		81,909	1	34,283
9-11		1,117,510		201,625		242,048		400,483		844,156		17,194		16,666	7	63,516		2,314		81,909	6	34,289
9-13		1,117,510		201,625		242,048		400,483		844,156	1	17,195		16,666	13	63,529		2,314		81,909	3	34,292
9-16		1,117,510		201,625		242,048		400,483		844,156		17,195		16,666		63,529		2,314		81,909		34,292
9-18		1,117,510		201,625		242,048		400,483		844,156		17,195		16,666	4	63,533		2,314		81,909		34,292
9-23		1,117,510		201,625		242,048		400,483		844,156		17,195		16,666	1	63,534		2,314		81,909		34,292

Table 5. Pink salmon catch by area and date, Upper Cook Inlet, 1991.

	DRIFT excluding CHINITNA		EAST SIDE SET NET																NORTHERN DISTRICT SET NET			
			SALAMATOF		K-BEACH		COHOE/NINILCHIK		TOTAL		WESTERN		KUSTATAN		KALGIN		CHINITNA		WEST SIDE		EAST SIDE	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
5-27																						
5-31																						
6-03																						
6-07																						
6-10																						
6-14																						
6-17																						
6-21																						
6-24																					1	1
6-28	1	1													1	1					3	4
7-01	4	5	5	5	1	1	12	12	18	18	3	3				1	2	2			16	20
7-05	12	17	22	27	1	2	34	46	57	75	2	5	2	2	17	18	1	3	6	6	51	71
7-06		17		27	3	5	107	153	110	185		5		2		18		3		6		71
7-08	298	315	30	57	2	7	37	190	69	254	12	17		2	3	21	5	8	4	10	9	80
7-12	61	376	52	109	45	52	297	487	394	648		17	11	13	31	52	11	19	46	56	72	152
7-15	1,779	2,155	149	258	50	102	262	749	461	1,109		17	3	16	121	173	15	34	569	625	224	376
7-18		2,155		258	7	109	58	807	65	1,174		17		16		173		34		625		376
7-19	1,894	4,049	123	381	27	136	245	1,052	395	1,569		17	4	20	151	324	24	58	1,341	1,966	166	542
7-20		4,049		381	30	166	322	1,374	352	1,921		17		20		324		58		1,966		542
7-21		4,049		381		166		1,374		1,921		17		20		324		58	11	1,977		542
7-22		4,049		381		166		1,374		1,921		17	15	35	30	354	24	82	1,652	3,629	279	821
7-23		4,049		381		166		1,374		1,921		17		35		354		82	10	3,639		821
7-26		4,049		381		166		1,374		1,921		17		35		354	22	104		3,639		821
7-29	769	4,818	43	424	13	179	63	1,437	119	2,040		17	5	40	69	423	19	123		3,639		821
7-31	56	4,874		424	6	185	56	1,493	62	2,102		17		40	1	424		123		3,639		821
8-01	73	4,947	62	486	14	199	68	1,561	144	2,246		17		40	46	470		123		3,639		821
8-02	434	5,381	75	561	4	203	68	1,629	147	2,393	27	44	10	50	49	519	27	150	270	3,909	79	900
8-03	13	5,394	52	613	7	210	52	1,681	111	2,504		44		50	8	527		150		3,909		900
8-04	4	5,398	19	632	5	215	15	1,696	39	2,543		44		50	18	545		150		3,909		900
8-05	228	5,626	23	655	11	226	44	1,740	78	2,621	28	72	2	52	8	553	22	172	206	4,115	4	904
8-09	43	5,669	6	661	5	231	9	1,749	20	2,641	11	83	1	53	8	561	18	190	72	4,187	5	909
8-12	66	5,735	11	672	13	244	5	1,754	29	2,670	34	117	3	56	15	576	31	221	18	4,205	9	918
8-16	29	5,764		672		244		1,754		2,670	6	123	1	57	1	577	7	228	10	4,215	5	923
8-19	5	5,769		672		244		1,754		2,670	23	146	1	58	4	581	6	234	4	4,219	5	928
8-21	14	5,783		672		244		1,754		2,670	16	162		58	1	582		234		4,219	1	929
8-23	6	5,789		672		244		1,754		2,670	3	165	1	59	2	584	2	236	4	4,223	1	930
8-26		5,789		672		244		1,754		2,670	1	166		59	1	585		236		4,223		930
8-28	2	5,791		672		244		1,754		2,670	2	168	1	60		585		236		4,223		930

Table 6. Chum salmon catch by area and date, Upper Cook Inlet, 1991.

	DRIFT excluding CHINITNA		EAST SIDE SET NET																NORTHERN DISTRICT SET NET			
			SALAMATOF		K-BEACH		COHOE/NINILCHIK		TOTAL		WESTERN		KUSTATAN		KALGIN		CHINITNA		WEST SIDE		EAST SIDE	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
5-27																						
5-31																						
6-03																						
6-07																						
6-10																						
6-14																						
6-17																						
6-21																						
6-24											1	1										
6-28	38	38										1					2	2				
7-01	277	315	3	3			2	2	5	5	1	2						2	1	1		
7-05	300	615		3			1	3	1	6	2	4					2	4	3	4	4	4
7-06	9	624		3			1	4	1	7		4						4		4		4
7-08	6,789	7,413	3	6	6	6	5	9	14	21	10	14			20	20	2	6	3	7		4
7-12	27	7,440	3	9		6		9	3	24		14	10	10		20	66	72	15	22	20	24
7-15	26,291	33,731	23	32	3	9	1	10	27	51		14		10	10	30	124	196	280	302	193	217
7-18		33,731		32	6	15		10	6	57		14		10		30		196		302		217
7-19	35,736	69,467	27	59	1	16	1	11	29	86		14	20	30	67	97	340	536	2,610	2,912	351	568
7-20		69,467		59	1	17	8	19	9	95		14		30		97		536		2,912		568
7-21		69,467		59		17		19		95		14		30		97		536	427	3,339		568
7-22		69,467		59		17		19		95		14		30	76	173	187	723	2,224	5,563	295	863
7-23		69,467		59		17		19		95		14		30		173		723	534	6,097		863
7-26		69,467		59		17		19		95		14		30		173	373	1,096		6,097		863
7-29	29,996	99,463	47	106	6	23	7	26	60	155		14	2	32	1,159	1,332	552	1,648		6,097		863
7-31	1,378	100,841		106	12	35	75	101	87	242		14		32	182	1,514		1,648		6,097		863
8-01	4,524	105,365	229	335	7	42	66	167	302	544		14		32	571	2,085		1,648		6,097		863
8-02	33,006	138,371	340	675	3	45	48	215	391	935	1,004	1,018	3	35	218	2,303	395	2,043	7,809	13,906	404	1,267
8-03	104	138,475	198	873		45	23	238	221	1,156		1,018		35	67	2,370		2,043		13,906		1,267
8-04	5	138,480	173	1,046	4	49	11	249	188	1,344		1,018		35	205	2,575		2,043		13,906		1,267
8-05	41,788	180,268	145	1,191	95	144	13	262	253	1,597	1,477	2,495	13	48	81	2,656	687	2,730	7,051	20,957	1,008	2,275
8-09	20,176	200,444	106	1,297	2	146	8	270	116	1,713	387	2,882	4	52	58	2,714	1,427	4,157	4,696	25,653	236	2,511
8-12	13,388	213,832	536	1,833	118	264	20	290	674	2,387	323	3,205	27	79	75	2,789	3,151	7,308	1,449	27,102	341	2,852
8-16	911	214,743		1,833		264		290		2,387	183	3,388	26	105	64	2,853	3,600	10,908	3,173	30,275	815	3,667
8-19	251	214,994		1,833		264		290		2,387	188	3,576	26	131	145	2,998	1,996	12,904	1,875	32,150	214	3,881
8-21	229	215,223		1,833		264		290		2,387	359	3,935	35	166	183	3,181		12,904	1,479	33,629	443	4,324
8-23	163	215,386		1,833		264		290		2,387	171	4,106	26	192	34	3,215	1,011	13,915	893	34,522	104	4,428
8-26	80	215,466		1,833		264		290		2,387	111	4,217	7	199	87	3,302	1,027	14,942	146	34,668	15	4,443
8-28	3	215,469		1,833		264		290		2,387	27	4,244	3	202	22	3,324		14,942	119	34,787	14	4,457
8-30		215,469		1,833		264		290		2,387	200	4,444	8	210	25	3,349		14,942	42	34,829	19	4,476
9-02		215,469		1,833		264		290		2,387	5	4,449		210	2	3,351		14,942		34,829	14	4,490
9-04		215,469		1,833		264		290		2,387	2	4,451	1	211	5	3,356		14,942	5	34,834	9	4,499
9-06		215,469		1,833		264		290		2,387	2	4,453		211		3,356	1	14,943		34,834	14	4,513
9-09		215,469		1,833		264		290		2,387	1	4,454		211	7	3,363		14,943		34,834		4,513
9-11		215,469		1,833		264		290		2,387	1	4,455		211		3,363		14,943	26	34,860	11	4,524
9-13		215,469		1,833		264		290		2,387		4,455		211	2	3,365		14,943		34,860	7	4,531
9-16		215,469		1,833		264		290		2,387		4,455		211		3,365		14,943	2	34,862		4,531

Table 7. Chinook salmon catch by area and date, Upper Cook Inlet, 1991.

	DRIFT		EAST SIDE SET NET																NORTHERN DISTRICT SET NET			
	excluding CHINITNA		SALAMATOF		K-BEACH		COHOE/NINILCHIK		TOTAL		WESTERN		KUSTATAN		KALGIN		CHINITNA		WEST SIDE		EAST SIDE	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
5-27													66	66								
5-31													71	137								
6-03													193	330					2,206	2,206	648	648
6-07													239	569						2,206		648
6-10													241	810					1,501	3,707	187	835
6-14													26	836						3,707		835
6-17											165	165	14	850					1,297	5,004	134	969
6-21											54	219	3	853						5,004		969
6-24											54	273		853					297	5,301	35	1,004
6-28											57	330	30	883	10	10	1	1	199	5,500	46	1,050
7-01	5	5	14	14	76	76	156	156	246	246	62	392	8	891	8	18		1	101	5,601	25	1,075
7-05	5	10	71	85	120	196	180	336	371	617	50	442	10	901	13	31		1	36	5,637	15	1,090
7-06	1	11		85	52	248	187	523	239	856		442		901		31		1		5,637		1,090
7-08	97	108	51	136	135	383	241	764	427	1,283	105	547		901	4	35	1	2	11	5,648	4	1,094
7-12	26	134	70	206	247	630	278	1,042	595	1,878		547	8	909	15	50		2	16	5,664	1	1,095
7-15	43	177	138	344	274	904	349	1,391	761	2,639		547	2	911	7	57		2	27	5,691		1,095
7-18		177		344	48	952	91	1,482	139	2,778		547		911		57		2		5,691		1,095
7-19	29	206	121	465	205	1,157	240	1,722	566	3,344		547	5	916	2	59		2	26	5,717	4	1,099
7-20		206		465	60	1,217	203	1,925	263	3,607		547		916		59		2		5,717		1,099
7-21		206		465		1,217		1,925		3,607		547		916		59		2		5,717		1,099
7-22		206		465		1,217		1,925		3,607		547	2	918	2	61		2	12	5,729	5	1,104
7-23		206		465		1,217		1,925		3,607		547		918		61		2		5,729		1,104
7-26		206		465		1,217		1,925		3,607		547		918		61		2		5,729		1,104
7-29	4	210	36	501	216	1,433	91	2,016	343	3,950		547		918		61		2		5,729		1,104
7-31	5	215		501	66	1,499	57	2,073	123	4,073		547		918	1	62		2		5,729		1,104
8-01	5	220	26	527	82	1,581	49	2,122	157	4,230		547		918	1	63		2		5,729		1,104
8-02	4	224	46	573	58	1,639	72	2,194	176	4,406	4	551	2	920	2	65		2	6	5,735		1,104
8-03	2	226	34	607	43	1,682	54	2,248	131	4,537		551		920		65		2		5,735		1,104
8-04		226	31	638	60	1,742	27	2,275	118	4,655		551		920	2	67		2		5,735		1,104
8-05	6	232	34	672	49	1,791	58	2,333	141	4,796		551		920		67		2	1	5,736	1	1,105
8-09	3	235	11	683	20	1,811	22	2,355	53	4,849		551		920		67		2	3	5,739	2	1,107
8-12	3	238	12	695	22	1,833	8	2,363	42	4,891		551		920		67		2	4	5,743		1,107
8-16		238		695		1,833		2,363		4,891		551		920		67		2	3	5,746		1,107
8-19		238		695		1,833		2,363		4,891	1	552		920	1	68		2		5,746	2	1,109
8-21	1	239		695		1,833		2,363		4,891		552	1	921		68		2		5,746		1,109
8-23	1	240		695		1,833		2,363		4,891		552	1	922		68		2		5,746		1,109
8-26		240		695		1,833		2,363		4,891		552		922		68		2		5,746		1,109
8-28		240		695		1,833		2,363		4,891		552		922		68		2	3	5,749		1,109
8-30		240		695		1,833		2,363		4,891		552		922		68		2	1	5,750		1,109
9-02		240		695		1,833		2,363		4,891		552		922		68		2		5,750		1,109
9-04		240		695		1,833		2,363		4,891		552		922		68		2		5,750		1,109
9-06		240		695		1,833		2,363		4,891		552		922		68		2		5,750		1,109
9-09		240		695		1,833		2,363		4,891		552		922		68		2		5,750		1,109
9-11	1	241		695		1,833		2,363		4,891		552		922		68		2		5,750		1,109

Table 8. Coho salmon catch by area and date, Upper Cook Inlet, 1991.

	DRIFT excluding CHINITNA		EAST SIDE SET NET																NORTHERN DISTRICT SET NET			
			SALAMATOF		K-BEACH		COHOE/NINILCHIK		TOTAL		WESTERN		KUSTATAN		KALGIN		CHINITNA		WEST SIDE		EAST SIDE	
Date	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum	Daily	Cum
5-27																						
5-31																						
6-03																						
6-07																						
6-10																						
6-14																						
6-17																						
6-21																						
6-24																			3	3		
6-28	2	2													1	1			1	4		
7-01	54	56									1	1	2	2	10	11			1	5	1	1
7-05	192	248	12	12	29	29	6	6	47	47	3	4	10	12	93	104			52	57	7	8
7-06	6	254		12	2	31	13	19	15	62		4		12		104				57		8
7-08	4,918	5,172	28	40	5	36	13	32	46	108	21	25	13	25	163	267	1	1	34	91		8
7-12	16	5,188	58	98	30	66	53	85	141	249		25	205	230	334	601	5	6	338	429	74	82
7-15	39,378	44,566	672	770	418	484	133	218	1,223	1,472		25	418	648	1,521	2,122	15	21	4,568	4,997	387	469
7-18		44,566		770	91	575	27	245	118	1,590		25		648		2,122		21		4,997		469
7-19	24,915	69,481	754	1,524	185	760	78	323	1,017	2,607		25	1,167	1,815	2,819	4,941	30	51	22,045	27,042	817	1,286
7-20		69,481		1,524	60	820	124	447	184	2,791		25		1,815		4,941		51		27,042		1,286
7-21		69,481		1,524		820		447		2,791		25		1,815		4,941		51	943	27,985		1,286
7-22		69,481		1,524		820		447		2,791		25	1,548	3,363	2,234	7,175	41	92	13,005	40,990	1,174	2,460
7-23		69,481		1,524		820		447		2,791		25		3,363		7,175		92	687	41,677		2,460
7-26		69,481		1,524		820		447		2,791		25		3,363		7,175	64	156		41,677		2,460
7-29	13,796	83,277	1,179	2,703	588	1,408	538	985	2,305	5,096		25	2,860	6,223	3,935	11,110	102	258		41,677		2,460
7-31	1,494	84,771		2,703	225	1,633	1,350	2,335	1,575	6,671		25		6,223	2,643	13,753		258		41,677		2,460
8-01	2,819	87,590	1,102	3,805	445	2,078	1,613	3,948	3,160	9,831		25		6,223	3,219	16,972		258		41,677		2,460
8-02	23,504	111,094	2,066	5,871	915	2,993	1,365	5,313	4,346	14,177	1,312	1,337	2,792	9,015	7,698	24,667	146	404	16,496	58,173	2,044	4,504
8-03	138	111,232	969	6,840	365	3,358	762	6,075	2,096	16,273		1,337		9,015	2,435	27,102		404		58,173		4,504
8-04	47	111,279	897	7,737	436	3,794	958	7,033	2,291	18,564		1,337		9,015	4,044	31,146		404		58,173		4,504
8-05	21,345	132,624	1,272	9,009	1,000	4,794	1,141	8,174	3,413	21,977	923	2,260	1,675	10,690	2,404	33,550	66	470	15,182	73,355	1,105	5,609
8-09	18,927	151,551	1,297	10,306	831	5,625	1,336	9,510	3,464	25,441	783	3,043	860	11,550	3,220	36,770	210	680	6,940	80,295	632	6,241
8-12	12,796	164,347	1,757	12,063	1,789	7,414	1,448	10,958	4,994	30,435	1,649	4,692	1,447	12,997	3,962	40,732	373	1,053	4,386	84,681	1,151	7,392
8-16	3,196	167,543		12,063		7,414		10,958		30,435	874	5,566	870	13,867	2,851	43,583	496	1,549	5,627	90,308	2,516	9,908
8-19	2,220	169,763		12,063		7,414		10,958		30,435	1,992	7,558	764	14,631	1,267	44,850	302	1,851	4,193	94,501	1,773	11,681
8-21	1,854	171,617		12,063		7,414		10,958		30,435	1,529	9,087	775	15,406	1,058	45,908		1,851	3,040	97,541	4,311	15,992
8-23	1,841	173,458		12,063		7,414		10,958		30,435	1,450	10,537	594	16,000	726	46,634	390	2,241	3,221	100,762	3,054	19,046
8-26	965	174,423		12,063		7,414		10,958		30,435	2,267	12,804	185	16,185	1,228	47,862	454	2,695	1,071	101,833	1,063	20,109
8-28	545	174,968		12,063		7,414		10,958		30,435	890	13,694	343	16,528	553	48,415		2,695	594	102,427	1,408	21,517
8-30		174,968		12,063		7,414		10,958		30,435	1,216	14,910	80	16,608	395	48,810	455	3,150	805	103,232	1,020	22,537
9-02		174,968		12,063		7,414		10,958		30,435	1,113	16,023	62	16,670	191	49,001		3,150	579	103,811	1,411	23,948
9-04		174,968		12,063		7,414		10,958		30,435	780	16,803	63	16,733	67	49,068		3,150	378	104,189	1,484	25,432
9-06		174,968		12,063		7,414		10,958		30,435	856	17,659		16,733	90	49,158	152	3,302	456	104,645	1,068	26,500
9-09		174,968		12,063		7,414		10,958		30,435	283	17,942		16,733	97	49,255		3,302	30	104,675	280	26,780
9-11	83	175,051		12,063		7,414		10,958		30,435	258	18,200		16,733	51	49,306		3,302	67	104,742	281	27,061
9-13		175,051		12,063		7,414		10,958		30,435	161	18,361		16,733	69	49,375		3,302	65	104,807	231	27,292
9-16		175,051		12,063		7,414		10,958		30,435		18,361		16,733	112	49,487		3,302	72	104,879	40	27,332
9-18		175,051		12,063		7,414		10,958		30,435		18,361		16,733	60	49,547		3,302	17	104,896	42	27,374
9-23		175,051		12,063		7,414		10,958		30,435		18,361		16,733	25	49,572		3,302		104,896		27,374

Table 9. Commercial catch by gear, statistical area and species, Upper Cook Inlet, 1991.

Gear	District	Subdistrict	Stat Area	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
Drift	Central	All	All	578	241	1,117,514	175,504	5,791	215,469	1,514,519
Set Net	Central	Upper	244-21	104	1,285	168,539	4,763	1,008	96	175,691
			244-22	105	1,078	231,944	6,195	746	194	240,157
			244-30	166	1,833	242,048	7,414	244	264	251,803
			244-40	122	695	201,625	12,063	672	1,833	216,888
			All	431	4,891	844,156	30,435	2,670	2,387	884,539
		Kalgin Is.	246-10	26	47	43,097	33,551	471	2,644	79,810
			246-20	9	21	20,437	16,021	114	721	37,314
			All	32	68	63,534	49,572	585	3,365	117,124
		Chinitna	245-10	7	2	2,310	2,849	236	14,943	20,340
		Western	245-20	10	5	1,370	9,022	46	554	10,997
			245-30	27	336	8,274	3,885	76	3,375	15,946
			245-40	14	105	5,520	4,791	42	445	10,903
			245-50	15	106	2,031	663	4	81	2,885
			All	53	552	17,195	18,361	168	4,455	40,731
		Kustatan	245-55	44	864	13,432	7,713	18	55	22,082
			245-60	11	58	3,234	9,020	42	156	12,510
			All	50	922	16,666	16,733	60	211	34,592
		All	All	513	6,435	943,861	117,950	3,719	25,361	1,097,326
	Northern	General	247-10	71	1,867	9,111	14,813	717	1,426	27,934
			247-20	39	761	20,368	28,105	1,483	3,989	54,706
			247-30	36	2,277	19,237	31,091	1,241	11,638	65,484
			247-41	29	477	10,631	10,296	472	5,458	27,334
			247-42	21	82	3,519	9,691	55	4,585	17,932
			247-43	10	286	8,584	9,270	234	6,805	25,179
			247-50	23	0	10,459	1,630	21	961	13,071
			All	145	5,750	81,909	104,896	4,223	34,862	231,640
		Eastern	247-70	25	539	13,701	9,895	500	3,639	28,274
			247-80	18	314	8,789	5,673	206	649	15,631
			247-90	15	256	11,802	11,806	224	243	24,331
			All	48	1,109	34,292	27,374	930	4,531	68,236
		All	All	188	6,859	116,201	132,270	5,153	39,393	299,876
	All	All	All	632	13,294	1,060,062	250,220	8,872	64,754	1,397,202
Seine	All	All	All	0	0	0	0	0	0	0
All	All	All	All	1,210	13,535	2,177,576	425,724	14,663	280,223	2,911,721

Table 10. Commercial salmon catch per permit by statistical area, Upper Cook Inlet, 1991.

Gear	District	Subdistrict	Stat Area	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
Drift	Central	All	All	578	0	1,933	304	10	373	2,620
Set Net	Central	Upper	244-21	104	12	1,621	46	10	1	1,689
			244-22	105	10	2,209	59	7	2	2,287
			244-30	166	11	1,458	45	1	2	1,517
			244-40	122	6	1,653	99	6	15	1,778
			All	431	11	1,959	71	6	6	2,052
		Kalgin Is.	246-10	26	2	1,658	1,290	18	102	3,070
			246-20	9	2	2,271	1,780	13	80	4,146
			All	32	2	1,985	1,549	18	105	3,660
		Chinitna	245-10	7	0	330	407	34	2,135	2,906
		Western	245-20	10	1	137	902	5	55	1,100
			245-30	27	12	306	144	3	125	591
			245-40	14	8	394	342	3	32	779
			245-50	15	7	135	44	0	5	192
			All	53	10	324	346	3	84	769
		Kustatan	245-55	44	20	305	175	0	1	502
			245-60	11	5	294	820	4	14	1,137
			All	50	18	333	335	1	4	692
		All	All	513	13	1,840	230	7	49	2,139
	Northern	General	247-10	71	26	128	209	10	20	393
			247-20	39	20	522	721	38	102	1,403
			247-30	36	63	534	864	34	323	1,819
			247-41	29	16	367	355	16	188	943
			247-42	21	4	168	461	3	218	854
			247-43	10	29	858	927	23	681	2,518
			247-50	23	0	455	71	1	42	568
			All	145	40	565	723	29	240	1,598
		Eastern	247-70	25	22	548	396	20	146	1,131
			247-80	18	17	488	315	11	36	868
			247-90	15	17	787	787	15	16	1,622
			All	48	23	714	570	19	94	1,422
		All	All	188	36	618	704	27	210	1,595
	All	All	All	632	21	1,677	396	14	102	2,211
Seine	All	All	All	0	0	0	0	0	0	0
All	All	All	All	1,210	11	1,800	352	12	232	2,406

Table 11. Commercial fishery emergency orders issued during the 1991 Upper Cook Inlet season.

Emergency Order No.	Effective Date	Action	Reason
2S-01-91	May 02	Amended the closed waters description in the Big River area. Reduced fishing periods from 3 days per week to 2.	Provide better protection to salmon streams in the area and make more effective use of the open waters.
2S-02-91	May 24	Closed commercial herring fishing in all waters of Upper Cook Inlet at 3:00 P.M., May 24.	Weak herring returns to all areas of the Inlet.
2S-03-91	June 28	Opened the Chinitna Bay Subdistrict to drift netting and seining on regular Monday and Friday periods from June 28 to July 15.	No local stocks present in the bay during this time period.
2S-04-91	July 5	Opened set netting in the Upper Subdistrict south of the Blanchard line from 7:00 P.M. July 5 to 7:00 P.M. July 6. Opened drift netting in the Upper Subdistrict south of the Blanchard line and within 3 miles of shore from 7:00 P.M. to 10:00 P.M. July 5 and 5:00 A.M. to 7:00 P.M. July 6.	Reduce the rate of escapement of sockeye salmon into the Kasilof River.
2S-05-91	July 12	Closed drift gillnetting in the Central District on July 12 except in the Upper Subdistrict south of Colliers dock and within 3 miles of shore.	Reduce the exploitation of sockeye salmon bound for the Susitna River.
2S-06-91	July 12	Closed set netting in the Western Subdistrict until further notice.	Severely lagging sockeye salmon escapement into the Crescent River.

Table 11. (Page 2 of 4.)

Emergency Order No.	Effective Date	Action	Reason
2S-07-91	July 18	Opened set netting in the Upper Subdistrict south of the Blanchard Line within 1/2 mile of shore from 12:00 noon, July 18 until 7:00 A.M., July 19.	Reduce the rate of escapement of sockeye salmon into the Kasilof River.
2S-08-91	July 19	Opened set netting in the Upper Subdistrict south of the Blanchard Line within 1/2 mile of shore from 7:00 P.M. July 19 until 11:00 P.M. July 20.	Reduce the rate of escapement of sockeye salmon into the Kasilof River.
2S-09-91	July 22	Closed set netting in the Upper Subdistrict and drift netting in the Central District on July 22.	Reduce the exploitation of sockeye salmon bound for the Kenai River.
2S-10-91	July 26	Closed set netting in all areas except the Chinitna Bay Subdistrict and drift netting in all areas on July 26.	Reduce the exploitation of Kenai, Kasilof and Crescent River sockeye salmon.
2S-11-91	July 29	Closed set netting in the Northern District and drift netting in the Western Subdistrict on July 29.	Reduce the exploitation of Susitna and Crescent River sockeye salmon stocks.
2S-12-91	July 31	Opened set netting in the Upper Subdistrict south of the Blanchard Line and drifting in the Upper Subdistrict south of the Blanchard Line within 3 miles of shore on July 31 from 7:00 A.M. to 7:00 P.M.	Increase the exploitation rate of sockeye salmon bound for the Kasilof River.
2S-13-91	July 31	Opened set netting in the Kalgin Island Subdistrict on July 31 from 7:00 A.M. to 7:00 P.M.	Increase the exploitation of sockeye salmon stocks bound for Packers Creek.

Table 11. (Page 3 of 4.)

Emergency Order No.	Effective Date	Action	Reason
2S-14-91	July 31	Opened set netting in the Kalgin Island Subdistrict and the Upper Subdistrict south of the Blanchard Line from 7:00 P.M. July 31 until 7:00 A.M. August 2. Opened set netting in the remainder of the Upper Subdistrict from 7:00 A.M. August 1 until 7:00 A.M. August 2. Opened drift netting in the Upper Subdistrict south of the Blanchard Line within 3 miles of shore from 7:00 P.M. to 10:00 P.M. July 31. Opened drift netting in the Upper Subdistrict south of Colliers Dock within 3 miles of shore from 7:00 A.M. to 10:00 P.M. August 1 and 5:00 A.M. to 7:00 A.M. August 2.	Increase the exploitation of sockeye salmon stocks bound for Packers Creek, the Kasilof River and the Kenai River.
2S-15-91	Aug. 2	Re-opened set netting in the Western Subdistrict on regular Monday and Friday periods.	Sockeye salmon return to Crescent River complete.
2S-16-91	Aug. 2	Opened set netting in the Kalgin Island and Upper Subdistricts from 7:00 P.M. August 2 until 10:00 P.M. August 3. Opened drift netting in the Upper Subdistrict south of Colliers Dock within 3 miles of shore from 7:00 P.M. to 10:00 P.M. August 2 and from 5:00 A.M. to 10:00 P.M. August 3.	Increase the harvest rate of sockeye salmon returning to Packers Creek, the Kasilof River and the Kenai River.

Table 11. (Page 4 of 4.)

Emergency Order No.	Effective Date	Action	Reason
2S-17-91	Aug. 3	Opened set netting in the Kalgin Island and Upper Subdistricts from 10:00 P.M. August 3 until 7:00 A.M. August 5. Opened drift netting in the Upper Subdistrict south of Colliers Dock within 3 miles of shore from 5:00 A.M. to 10:00 P.M. August 4 and from 5:00 A.M. to 7:00 A.M. August 5.	Increase the harvest rate of sockeye salmon bound for the Kenai and Kasilof Rivers and Packers Creek.
2S-18-91	Aug. 21	Opened set netting in all areas except the Chinitna Bay and Upper Subdistricts and drift netting in all areas of the Central District except the Chinitna Bay Subdistrict and that portion within 5 miles of the Kenai Peninsula shoreline each Wednesday from 7:00 A.M. to 7:00 P.M. for the remainder of the season.	Above-average returns of coho salmon to many minor systems.
2S-19-91	Aug. 30	Opened the Chinitna Bay Subdistrict to drifting and seining on Mondays and Fridays from 7:00 A.M. to 7:00 P.M. for the remainder of the season.	Adequate chum salmon escapement achieved in Clearwater Creek.

Table 12. Commercial salmon fishing periods, Upper Cook Inlet, 1991.

Date	Day	Time	Set Gill Net	Drift Gill Net
May 27	Mon	0700-1900	Big River Area	
May 31	Fri	0700-1900	Big River Area	
June 3	Mon	0700-1300	Northern District, Big River	
		1300-1900	Big River Area	
June 7	Fri	0700-1900	Big River Area	
June 10	Mon	0700-1300	Northern District, Big River	
		1300-1900	Big River Area	
June 14	Fri	0700-1900	Big River Area	
June 17	Mon	0700-1300	Big River, Western, Northern	
		1300-1900	Big River Area, Western	
June 21	Fri	0700-1900	Big River Area, Western	
June 24	Mon	0700-1300	Big River, Western, Northern	
		1300-1900	Big River Area, Western	
June 28	Fri	0700-1900	All except Upper Subdistrict	All
July 1	Mon	0700-1900	All	All
July 5	Fri	0700-1900	All	All
		1900-2200	Upper south of Blanchard Line	South of Blanchard Line within 3 mi.
		2200-2400	Upper south of Blanchard Line	
July 6	Sat	0000-0500	Upper south of Blanchard Line	
		0500-1900	Upper south of Blanchard Line	South of Blanchard Line within 3 mi.
July 8	Mon	0700-1900	All	All
July 12	Fri	0700-1900	All except Western	South of Colliers within 3 miles
July 15	Mon	0700-1900	All except Western	All
July 18	Thur	1200-2400	Upper south of Blanchard within 1/2 mile	
July 19	Fri	0000-0700	Upper south of Blanchard within 1/2 mile	
		0700-1900	All except Western	All except Chinitna
		1900-2400	Upper south of Blanchard within 1/2 mile	
July 20	Sat	0000-2300	Upper south of Blanchard within 1/2 mile	
July 21	Sun	0700-1900	Knik Arm	
July 22	Mon	0700-1900	All except Upper, Western	Closed
July 23	Tue	0700-1900	Knik Arm	
July 26	Fri	0700-1900	Chinitna Bay	Closed
July 29	Mon	0700-1900	All except Northern, Western	All except Western, Chinitna
July 31	Wed	0700-2200	Upper south of Blanchard Line, Kalgin Island	Upper south of Blanchard Line within 3 miles of shore
		2200-2400	Upper south of Blanchard Line, Kalgin Island	

Table 12. (Page 2 of 2.)

Date	Day	Time	Set Gill Net	Drift Gill Net
Aug 1	Thur	0000-0700	Upper south of Blanchard Line, Kalgin Island	
		0700-2200	Upper, Kalgin Island	Upper south of Colliers inside 3 miles
		2200-2400	Upper, Kalgin Island	
Aug 2	Fri	0000-0500	Upper, Kalgin Island	
		0500-0700	Upper, Kalgin Island	Upper south of Colliers inside 3 miles
		0700-1900	All	All except Chinitna
		1900-2200	Upper, Kalgin Island	Upper south of Colliers inside 3 miles
		2200-2400	Upper, Kalgin Island	
Aug 3	Sat	0000-0500	Upper, Kalgin Island	
		0500-2200	Upper, Kalgin Island	Upper south of Colliers inside 3 miles
		2200-2400	Upper, Kalgin Island	
Aug 4	Sun	0000-0500	Upper, Kalgin Island	
		0500-2200	Upper, Kalgin Island	Upper south of Colliers inside 3 miles
		2200-2400	Upper, Kalgin Island	
Aug 5	Mon	0000-0500	Upper, Kalgin Island	
		0500-0700	Upper, Kalgin Island	Upper south of Colliers inside 3 miles
		0700-1900	All	All except Chinitna
Aug 9	Fri	0700-1900	All	All except Chinitna
Aug 12	Mon	0700-1900	All	All except Chinitna
Aug 16	Fri	0700-1900	All except Upper	All except Chinitna
Aug 19	Mon	0700-1900	All except Upper	All except Chinitna
Aug 21	Wed	0700-1900	All except Upper, Chinitna	All except Chinitna or within 5 miles of Kenai Peninsula
Aug 23	Fri	0700-1900	All except Upper	All except Chinitna or within 5 miles of Kenai Peninsula
Aug 26	Mon	0700-1900	All except Upper	All except Chinitna or within 5 miles of Kenai Peninsula
Aug 28	Wed	0700-1900	All except Upper, Chinitna	All except Chinitna or within 5 miles of Kenai Peninsula
Aug 30	Fri	0700-1900	All except Upper	All except within 5 miles of Kenai Peninsula
Sept 2	Mon	0700-1900	All except Upper	All except within 5 miles of Kenai Peninsula
Sept 4	Wed	0700-1900	All except Upper, Chinitna	All except Chinitna or within 5 miles of Kenai Peninsula
Sept 6	Fri	0700-1900	All except Upper	All except within 5 miles of Kenai Peninsula

Fishing continued each Monday, Wednesday and Friday as described for Sept. 2, 4 and 6 for the remainder of the season.

Table 13. Buyers and processors of Upper Cook Inlet fishery products, 1991.

Buyer/Processor	Plant Site	Contact	Address
Alaska Gourmet F0403-5	Anchorage	Paul Schilling	P.O. Box 190733 Anchorage Ak. 99519
Anpac Inc. F0281-1	Anchorage	Sarah Barber	P.O. Box 92520 Anchorage Ak. 99509
Carlson Seafoods F1232-6	Kasilof	Dorius Carlson	HC2 Box 544 Kasilof Ak. 99610
Cook Inlet Processing F1155-2, F0186-3	Kenai	Pat Hardina	Box 8163 Nikiski Ak. 99635
D & G Enterprises F1070-0	Eagle River	Ken Duffus	P.O. Box 773435 Eagle River Ak. 99577-3435
Deep Creek Custom Packing F1051-5	Ninilchik	Jeff Berger	P.O. Box 39229 Ninilchik Ak. 99639
Dragnet Fisheries F0030-4	Kenai	Mike Mccune	P.O. Box 1260 Kenai Ak. 99615
Eagle Point F1390-5	Eagle River	Tom Rollman	P.O. Box 770778 Eagle River Ak. 99577
Ed's Kasilof Seafoods F0086-0	Kasilof	James Trujillo	P.O. Box 18 Kasilof Ak. 99610
Favco F0398-9	Anchorage	Susan Mcdermott	P.O. Box 190968 Anchorage Ak. 99519-0968
Icicle Seafoods F0133-0	Homer,Seward	Thomas King	P.O. Box 79003 Seattle Wa. 98119
Inlet Fish Producers F1231-6	Kenai	Elle Tikka	Box 530 Kenai Ak. 99611
John Cabot F0989-0	Seldovia	Delmar Molenkamp	Drawer E Seldovia Ak. 99663
Kachemak Fisheries F1274-0	Homer	Mark Mahan	P.O. Box 676 Homer Ak. 99603
Keener Packing F0394-5	Kasilof	Mike Sawinski	P.O. Box 890 Kenai Ak. 99611
Kenai Custom Seafoods F1182-3	Kenai	James Hill	P.O. Box 1649 Kenai Ak. 99611
Kenai Packers F0361-8	Kenai	Dan Foley	P.O. Box 31179 Seattle Wa. 98103
Pacific Alaska Seafoods F0130-7	Nikiski	Jerry Cartee	P.O. Box 7498 Nikiski Ak. 99635
Prime Alaska Seafoods F1113-8	Anchorage	Jack McLean	6135 Mike St. Anchorage Ak. 99518
R & J Enterprises F0838-6	Anchorage	Juanita Meier	4821 E. 101 St. Anchorage Ak. 99516
Royal Pacific Fisheries F0409-1	Kenai	Marvin Dragseth	P.O. Box 4609 Kenai Ak. 99611
Salamatof Seafoods F0037-1	Kenai	Wylie Reed	P.O. Box 5070 Kenai Ak. 99615

Table 13. (p. 2 of 2)

Buyer/Processor	Plant Site	Contact	Address
Samer-I Sea Foods F1168-3	Homer	Homer Ireland	Box 1017 Homer Ak. 99603
Seasonal Seafoods F0998-7	Kasilof	Baily Wharton	4039 21st Ave. Seattle Wa. 98199
SilverTip Fish F5383-0	Anchorage	Darrell Renner	P.O. Box 140414 Anchorage Ak. 99514
Snug Harbor Seafoods F1302-5	Kenai	Paul Dale	Box 701 Kenai Ak. 99611
Trans Aqua Int'l F1193-2	Kasilof	Taka Iwasaki	One Union Sq. #2800 Seattle Wa. 981101
Wards Cove Packing F0270-2	Kenai	Ray Landry	P.O. Box C-5030 Seattle Wa. 98105-0030
Whitney Foods F0827-7	Anchorage	Bruce Mitchell	P.O. Box 190429 Anchorage Ak. 99519-0429
10th and M Seafoods F0528-9	Anchorage	Bill Nix	1020 M Street Anchorage Ak. 99501

Table 14. Age, sex, and size composition of herring caught in gillnets, Tuxedni Bay, Upper Cook Inlet, 23 May 1991.

		Sex (No.)						Percent	Weight			Length			Biomass		
			Imm.	Ripe	Spawned		Total	of	Mean		Number	Mean		Number	No. Fish		
	Age	Male	Female	Female	Female	Unknown	No.	Total	(g)	SD	Weighed	(mm)	SD	Measured	X 1000	Tons	Tonnes
	1																
	2																
	3																
	4	1	0	1	0	0	2	0.6	133	2.8	2	216	4.2	2	0	0.0	0.0
	5	16	1	22	0	0	39	11.3	149	17.0	39	221	8.2	39	1	0.1	0.1
	6	57	0	44	1	0	102	29.7	164	19.6	101	229	7.9	102	2	0.3	0.3
	7	86	0	67	1	0	154	44.8	175	24.5	154	234	8.7	154	2	0.5	0.4
23 May	8	20	0	20	0	0	40	11.6	196	26.1	40	240	9.0	40	1	0.1	0.1
	9	3	0	2	0	0	5	1.5	183	31.1	5	233	12.4	5	0	0.0	0.0
	10	1	0	0	0	0	1	0.3	240	0.0	1	261	0.0	1	0	0.0	0.0
	11																
	12																
	13	0	0	1	0	0	1	0.3	329	0.0	1	273	0.0	1	0	0.0	0.0
	14																
	15																
	16																
Sample Total		184	1	157	2	0	344	100.0	172	27.4	343	232	10.2	344	5	1.0	0.9
Sex Composition		53.5	.3	45.6	.6												
Unaged		16	0	10	0	0	26	7.6	169	28.9	26	232	12.1	26			
Sex Composition		61.5	.0	38.5	.0												

Table 15. Age, sex, and size composition of herring caught in gillnets, Chinitna Bay, Upper Cook Inlet, 23 May 1991.

		Sex (No.)							Weight			Length			Biomass		
	Age	Male	Imm. Female	Ripe Female	Spawned Female	Unknown	Total No.	Percent of Total	Mean (g)	SD	Number Weighed	Mean (mm)	SD	Number Measured	No. Fish X 1000	Tons	Tonnes
	1																
	2																
	3																
	4	4	0	3	0	3	10	2.8	136	7.0	7	214	6.0	7	0	0.0	0.0
	5	22	0	11	0	3	36	10.1	164	16.2	33	227	8.8	33	1	0.1	0.1
	6	45	0	30	0	22	97	27.3	179	21.8	74	234	7.2	75	1	0.2	0.2
	7	69	0	51	0	24	144	40.6	197	28.0	120	240	8.6	120	2	0.4	0.4
23 May	8	20	0	18	0	10	48	13.5	206	29.6	37	242	10.1	38	1	0.1	0.1
	9	5	0	3	0	2	10	2.8	213	31.0	8	245	8.4	8	0	0.0	0.0
	10	3	0	2	0	3	8	2.3	232	15.4	5	257	10.5	5	0	0.0	0.0
	11	1	0	0	0	0	1	0.3	261	0.0	1	256	0.0	1	0	0.0	0.0
	12	1	0	0	0	0	1	0.3	261	0.0	1	264	0.0	1	0	0.0	0.0
	13																
	14																
	15																
	16																
Sample Total		170	0	118	0	67	355	100.0	190	30.6	286	237	10.8	288	5	1.0	0.9
Sex Composition		47.9	.0	33.2	.0												
Unaged		8	0	16	0	1	25	7.0	190	32.8	24	236	11.6	24			
Sex Composition		32.0	.0	64.0	.0												

Table 16. Age, sex, and size composition of herring caught in gillnets, Eastside, Upper Cook Inlet, 20 May 1991.

		Sex (No.)							Weight			Length			Biomass		
	Age	Male	Imm. Female	Ripe Female	Spawned Female	Unknown	Total No.	Percent of Total	Mean (g)	SD	Number Weighed	Mean (mm)	SD	Number Measured	No. Fish X 1000	Tons	Tonnes
	1																
	2																
	3	0	0	1	1	0	2	0.7	88	9.2	2	192	12.7	2	0	0.0	0.0
	4																
	5	6	0	20	0	0	26	9.0	152	20.4	26	219	9.2	26	0	0.1	0.1
	6	42	5	52	0	0	99	34.3	164	17.4	99	225	7.0	99	2	0.3	0.3
	7	47	2	58	0	0	107	37.0	181	24.5	106	232	9.1	107	2	0.4	0.3
20 May	8	19	0	21	0	0	40	13.8	202	21.9	40	238	7.9	40	1	0.2	0.1
	9	2	0	2	0	0	4	1.4	191	8.2	4	237	2.9	4	0	0.0	0.0
	10	3	0	3	0	0	6	2.1	231	55.2	6	248	9.8	6	0	0.0	0.0
	11	2	0	1	0	0	3	1.0	237	46.9	3	244	14.7	3	0	0.0	0.0
	12	1	0	0	0	0	1	0.3	208	0.0	1	249	0.0	1	0	0.0	0.0
	13	0	0	1	0	0	1	0.3	278	0.0	1	258	0.0	1	0	0.0	0.0
	14																
	15																
	16																
Sample Total		122	7	159	1	0	289	100.0	177	29.9	288	229	11.0	289	5	1.0	0.9
Sex Composition		42.2	2.4	55.0	.3												
Unaged		23	1	27	0	0	51	17.6	177	28.7	51	229	11.2	51			
Sex Composition		45.1	2.0	52.9	.0												

Table 17. Seldovia District tide tables, April-September, 1991.

APRIL

HIGH TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Sun	6:53	17.8	8:23	14.3
2	Mon	7:59	15.9	9:51	13.6
3	Tue	9:29	14.6	11:22	14.0
4	Wed	11:06	14.4	....	...
5	Thur	0:28	15.2	12:25	15.2
6	Fri	1:15	16.5	1:22	16.3
7	Sat	1:53	17.6	2:03	17.2
8	Sun	2:20	18.5	2:41	17.9
9	Mon	2:47	19.1	3:15	18.3
10	Tue	3:15	19.5	3:50	18.4
11	Wed	3:40	19.5	4:22	18.0
12	Thur	4:07	19.2	4:57	17.3
13	Fri	4:36	18.6	5:33	16.3
14	Sat	5:07	17.7	6:11	15.0
15	Sun	5:39	16.6	6:59	13.7
16	Mon	6:16	15.4	7:56	12.6
17	Tue	7:04	14.1	9:11	12.1
18	Wed	8:20	13.1	10:31	12.5
19	Thur	9:53	13.0	11:33	13.7
20	Fri	11:17	13.8	....	...
21	Sat	0:17	15.3	12:22	15.3
22	Sun	0:57	17.2	1:18	16.9
23	Mon	1:34	18.9	2:08	18.4
24	Tue	2:11	20.5	2:54	19.5
25	Wed	2:51	21.6	3:41	19.9
26	Thur	3:31	22.0	4:28	19.7
27	Fri	4:15	21.8	5:18	18.9
28	Sat	5:00	20.8	6:11	17.7
29	Sun	5:50	19.2	7:06	16.4
30	Mon	6:45	17.3	8:13	15.2

LOW TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Sun	....	...	1:41	-0.1
2	Mon	1:54	5.7	3:00	1.4
3	Tue	3:23	6.5	4:31	2.0
4	Wed	5:05	5.9	5:51	1.7
5	Thur	6:18	4.4	6:46	1.1
6	Fri	7:10	2.6	7:29	0.7
7	Sat	7:52	1.1	8:04	0.5
8	Sun	8:27	-0.2	8:36	0.5
9	Mon	9:01	-1.1	9:06	0.8
10	Tue	9:31	-1.6	9:37	1.3
11	Wed	10:03	-1.7	10:08	1.9
12	Thur	10:33	-1.4	10:40	2.9
13	Fri	11:05	-0.7	11:12	4.0
14	Sat	11:39	0.3	11:47	5.1
15	Sun	....	...	12:16	1.4
16	Mon	0:24	6.3	1:03	2.5
17	Tue	1:15	7.3	2:05	3.5
18	Wed	2:29	7.9	3:22	3.9
19	Thur	4:05	7.5	4:42	3.5
20	Fri	5:22	5.9	5:44	2.7
21	Sat	6:20	3.6	6:33	1.7
22	Sun	7:08	1.0	7:18	0.8
23	Mon	7:51	-1.5	8:00	0.2
24	Tue	8:33	-3.6	8:45	-0.1
25	Wed	9:17	-5.0	9:27	0.1
26	Thur	10:01	-5.6	10:11	0.6
27	Fri	10:49	-5.3	10:57	1.5
28	Sat	11:36	-4.2	11:47	2.7
29	Sun	....	...	12:29	-2.6
30	Mon	0:43	4.0	1:28	-0.8

MAY

HIGH TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Tue	7:54	15.5	9:27	14.7
2	Wed	9:14	14.1	10:38	14.8
3	Thur	10:40	13.7	11:40	15.5
4	Fri	11:59	14.1	....	...
5	Sat	0:27	16.2	12:54	14.8
6	Sun	1:05	17.0	1:42	15.6
7	Mon	1:35	17.6	2:22	16.3
8	Tue	2:04	18.1	2:59	16.8
9	Wed	2:37	18.5	3:33	17.0
10	Thur	3:06	18.6	4:08	17.0
11	Fri	3:38	18.5	4:44	16.6
12	Sat	4:10	18.1	5:23	16.0
13	Sun	4:46	17.4	6:03	15.2
14	Mon	5:21	16.5	6:48	14.4
15	Tue	6:06	15.5	7:37	13.8
16	Wed	6:56	14.4	8:29	13.6
17	Thur	8:01	13.5	9:28	14.0
18	Fri	9:19	13.1	10:24	14.8
19	Sat	10:39	13.4	11:16	16.0
20	Sun	11:51	14.4	....	...
21	Mon	0:04	17.5	12:54	15.8
22	Tue	0:49	19.0	1:50	17.1
23	Wed	1:37	20.2	2:43	18.2
24	Thur	2:22	21.1	3:32	18.8
25	Fri	3:11	21.4	4:21	19.0
26	Sat	3:58	21.2	5:10	18.6
27	Sun	4:49	20.3	6:03	18.0
28	Mon	5:42	18.9	6:55	17.2
29	Tue	6:36	17.2	7:49	16.5
30	Wed	7:36	15.5	8:43	15.9
31	Thur	8:42	14.0	9:42	15.5

LOW TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Tue	1:49	5.0	2:36	0.9
2	Wed	3:14	5.4	3:53	1.9
3	Thur	4:40	4.8	5:03	2.4
4	Fri	5:51	3.5	6:01	2.6
5	Sat	6:46	2.1	6:49	2.7
6	Sun	7:26	0.8	7:26	2.8
7	Mon	8:01	-0.3	8:00	2.8
8	Tue	8:35	-1.1	8:35	2.9
9	Wed	9:08	-1.6	9:09	3.0
10	Thur	9:39	-1.8	9:43	3.4
11	Fri	10:12	-1.6	10:18	3.9
12	Sat	10:46	-1.2	10:55	4.5
13	Sun	11:23	-0.5	11:34	5.2
14	Mon	....	...	NOON	0.3
15	Tue	0:16	5.9	12:45	1.1
16	Wed	1:09	6.4	1:37	2.0
17	Thur	2:13	6.4	2:34	2.6
18	Fri	3:27	5.8	3:42	3.1
19	Sat	4:39	4.3	4:47	3.1
20	Sun	5:43	2.2	5:45	2.9
21	Mon	6:36	-0.1	6:39	2.4
22	Tue	7:26	-2.4	7:31	2.0
23	Wed	8:14	-4.2	8:20	1.6
24	Thur	9:01	-5.4	9:09	1.4
25	Fri	9:48	-5.8	9:57	1.5
26	Sat	10:36	-5.5	10:46	1.8
27	Sun	11:26	-4.5	11:39	2.4
28	Mon	....	...	12:16	-3.1
29	Tue	0:35	3.2	1:09	-1.3
30	Wed	1:36	3.8	2:05	0.4
31	Thur	2:46	4.1	3:03	2.1

Table 17. (page 2 of 3)

JUNE

HIGH TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Fri	10:00	13.1	10:37	15.5
2	Sat	11:16	12.9	11:25	15.7
3	Sun	....	...	12:25	13.3
4	Mon	0:09	16.0	1:18	13.9
5	Tue	o:49	16.5	2:04	14.7
6	Wed	1:26	17.0	2:43	15.4
7	Thur	2:03	17.5	3:19	15.9
8	Fri	2:40	17.8	3:58	16.3
9	Sat	3:17	18.0	4:33	16.4
10	Sun	3:54	18.0	5:12	16.3
11	Mon	4:33	17.6	5:50	16.1
12	Tue	5:13	17.0	6:26	15.8
13	Wed	5:55	16.2	7:08	15.6
14	Thur	6:43	15.3	7:49	15.6
15	Fri	7:41	14.3	8:35	15.7
16	Sat	8:49	13.5	9:27	16.1
17	Sun	10:05	13.2	10:22	16.7
18	Mon	11:24	13.7	11:19	17.5
19	Tue	....	...	12:36	14.7
20	Wed	0:17	18.5	1:39	15.9
21	Thur	1:13	19.5	2:35	17.2
22	Fri	2:08	20.4	3:25	18.1
23	Sat	2:59	20.9	4:13	18.7
24	Sun	3:51	20.8	4:58	18.9
25	Mon	4:40	20.3	5:44	18.8
26	Tue	5:29	19.1	6:27	18.4
27	Wed	6:19	17.6	7:11	17.7
28	Thur	7:09	15.9	7:54	16.9
29	Fri	8:05	14.2	8:39	16.1
30	Sat	9:11	12.8	9:27	15.5

LOW TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Fri	4:00	3.9	4:06	3.4
2	Sat	5:10	3.2	5:06	4.3
3	Sun	6:09	2.3	5:57	4.8
4	Mon	6:54	1.3	6:44	5.0
5	Tue	7:34	0.4	7:31	4.9
6	Wed	8:11	-0.4	8:08	4.7
7	Thur	8:46	-1.1	8:48	4.5
8	Fri	9:22	-1.5	9:25	4.3
9	Sat	9:57	-1.7	10:02	4.2
10	Sun	10:33	-1.7	10:41	4.3
11	Mon	11:09	-1.4	11:21	4.5
12	Tue	11:45	-0.9	....	...
13	Wed	0:03	4.6	12:24	-0.3
14	Thur	0:53	4.7	1:06	0.8
15	Fri	1;49	4.5	1:54	1.8
16	Sat	2:49	3.9	2:53	2.9
17	Sun	3:59	2.9	3:55	3.8
18	Mon	5:06	1.4	5:04	4.2
19	Tue	6:09	-0.5	6:09	4.1
20	Wed	7:07	-2.3	7:09	3.6
21	Thur	8:00	-3.8	8:04	2.9
22	Fri	8:51	-4.9	8:57	2.2
23	Sat	9:39	-5.4	9:47	1.6
24	Sun	10:25	-5.3	10:37	1.4
25	Mon	11:10	-4.5	11:26	1.6
26	Tue	11:54	-3.1	....	...
27	Wed	0:16	2.0	12:37	-1.4
28	Thur	1:08	2.6	1:22	0.6
29	Fri	2:04	3.2	2:07	2.6
30	Sat	3:08	3.6	2:59	4.4

JULY

HIGH TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Sun	10:27	12.1	10:17	15.1
2	Mon	11:48	12.1	11:11	15.0
3	Tue	....	...	12:57	12.8
4	Wed	0:04	15.3	1:50	13.7
5	Thur	0:54	16.0	2:32	14.6
6	Fri	1:39	16.7	3:09	15.5
7	Sat	2:24	17.5	3:44	16.3
8	Sun	3:04	18.1	4:18	16.9
9	Mon	3:43	18.5	4:50	17.3
10	Tue	4:22	18.5	5:21	17.6
11	Wed	5:00	18.2	5:57	17.7
12	Thur	5:42	17.5	6:29	17.7
13	Fri	6:27	16.4	7:06	17.6
14	Sat	7:20	15.2	7:49	17.4
15	Sun	8:23	14.0	8:38	17.1
16	Mon	9:41	13.1	9:38	16.9
17	Tue	11:08	13.1	10:47	17.1
18	Wed	12:30p	14.1	11:59	17.8
19	Thur	....	...	1:37	15.5
20	Fri	1:05	18.8	2:30	17.0
21	Sat	2:01	19.8	3:15	18.3
22	Sun	2:53	20.6	3:57	19.2
23	Mon	3:43	20.8	4:36	19.7
24	Tue	4:28	20.5	5:15	19.8
25	Wed	5:10	19.5	5:50	19.4
26	Thur	5:55	18.1	6:24	18.7
27	Fri	6:37	16.5	7:01	17.7
28	Sat	7:25	14.7	7:36	16.6
29	Sun	8:18	13.1	8:18	15.5
30	Mon	9:32	11.9	9:08	14.6
31	Tue	11:06	11.5	10:15	14.2

LOW TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Sun	4:13	3.6	3:58	5.8
2	Mon	5:23	3.2	5:04	6.6
3	Tue	6:22	2.5	6:07	6.8
4	Wed	7;13	1.6	7:02	6.5
5	Thur	7:55	0.6	7:47	5.9
6	Fri	8:32	-0.4	8:30	5.1
7	Sat	9:07	-1.2	9:09	4.4
8	Sun	9:42	-1.8	9:48	3.8
9	Mon	10:16	-2.1	10:25	3.3
10	Tue	10:49	-2.1	11:05	2.9
11	Wed	11:23	-1.7	11:44	2.6
12	Thur	11:58	-0.8	....	...
13	Fri	0:29	2.5	12:37	0.4
14	Sat	1:20	2.4	1:20	1.9
15	Sun	2:15	2.3	2:13	3.5
16	Mon	3:24	2.0	3:16	4.9
17	Tue	4:38	1.3	4:35	5.7
18	Wed	5:53	0.1	5:51	5.5
19	Thur	6:57	-1.4	7:00	4.6
20	Fri	7:53	-2.9	7:58	3.3
21	Sat	8:43	-4.0	8:49	2.1
22	Sun	9:28	-4.5	9:38	1.1
23	Mon	10:08	-4.5	10:23	0.5
24	Tue	10:47	-3.7	11:05	0.5
25	Wed	11:26	-2.4	11:49	0.8
26	Thur	....	...	12:01	-0.6
27	Fri	0:32	1.6	12:37	1.4
28	Sat	1:16	2.5	1:17	3.5
29	Sun	2:05	3.5	1:57	5.5
30	Mon	3:07	4.2	2:52	7.1
31	Tue	4:29	4.5	4:11	8.1

Table 17. (page 3 of 3)

AUGUST

HIGH TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Wed	12:44p	12.2	11:27	14.4
2	Thur	....	...	1:37	13.4
3	Fri	0:33	15.3	2:16	14.6
4	Sat	1:27	16.5	2:48	15.9
5	Sun	2:09	17.7	3:17	17.0
6	Mon	2:49	18.8	3:49	18.1
7	Tue	3:27	19.5	4:17	18.9
8	Wed	4:05	19.8	4:46	19.5
9	Thur	4:45	19.5	5:18	19.7
10	Fri	5:26	18.8	5:50	19.6
11	Sat	6:11	17.6	6:27	19.2
12	Sun	7:03	16.0	7:09	18.4
13	Mon	8:05	14.4	8:02	17.5
14	Tue	9:27	13.2	9:09	16.6
15	Wed	11:06	13.1	10:35	16.4
16	Thur	12:33p	14.3	11:59	17.0
17	Fri	....	...	1:32	16.0
18	Sat	1:08	18.3	2:18	17.6
19	Sun	2:00	19.5	2:57	19.0
20	Mon	2:48	20.4	3:32	20.0
21	Tue	3:30	20.8	4:06	20.6
22	Wed	4:09	20.5	4:36	20.6
23	Thur	4:49	19.8	5:07	20.2
24	Fri	5:26	18.5	5:36	19.4
25	Sat	6:06	17.0	6:06	18.2
26	Sun	6:45	15.3	6:37	16.9
27	Mon	7:36	13.5	7:14	15.6
28	Tue	8:44	12.1	8:05	14.4
29	Wed	10:30	11.5	9:21	13.5
30	Thur	12:20p	12.2	10:58	13.7

LOW TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Wed	5:51	4.0	5:35	8.2
2	Thur	6:54	2.9	6:41	7.4
3	Fri	7:39	1.6	7:31	6.3
4	Sat	8:14	0.3	8:14	5.0
5	Sun	8:46	-0.8	8:52	3.7
6	Mon	9:17	-1.7	9:28	2.5
7	Tue	9:50	-2.2	10:04	1.5
8	Wed	10:22	-2.1	10:41	0.7
9	Thur	10:56	-1.6	11:20	0.4
10	Fri	11:31	-0.5	....	...
11	Sat	0:03	0.3	12:10	1.0
12	Sun	0:50	0.6	12:53	2.8
13	Mon	1:44	1.2	1:45	4.7
14	Tue	2:55	1.8	2:55	6.2
15	Wed	4:21	1.8	4:23	6.9
16	Thur	5:46	0.9	5:51	6.2
17	Fri	6:54	-0.5	7:00	4.6
18	Sat	7:47	-1.8	7:55	2.9
19	Sun	8:30	-2.8	8:40	1.3
20	Mon	9:09	-3.2	9:23	0.1
21	Tue	9:44	-2.9	10:02	-0.5
22	Wed	10:18	-2.2	10:41	-0.5
23	Thur	10:54	-0.9	11:16	-0.1
24	Fri	11:25	0.8	11:52	0.7
25	Sat	11:58	2.6	....	...
26	Sun	0:29	1.9	12:32	4.6
27	Mon	1:12	3.2	1:09	6.4
28	Tue	2:05	4.5	1:57	8.0
29	Wed	3:24	5.4	3:22	9.1
30	Thur	5:14	5.1	5:11	8.9

SEPTEMBER

HIGH TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Sat	0:15	14.8	1:47	15.0
2	Sun	1:07	16.3	2:14	16.6
3	Mon	1:50	17.9	2:43	18.0
4	Tue	2:30	19.3	3:09	19.4
5	Wed	3:09	20.2	3:38	20.5
6	Thur	3:47	20.7	4:07	21.2
7	Fri	4:29	20.5	4:41	21.4
8	Sat	5:10	19.7	5:15	21.0
9	Sun	5:58	18.3	5:54	20.2
10	Mon	6:51	16.5	6:40	18.8
11	Tue	7:56	14.7	7:36	17.2
12	Wed	9:23	13.6	8:57	15.9
13	Thur	11:06	13.9	10:34	15.6
14	Fri	....	...	12:22	15.2
15	Sat	0:01	16.5	1:15	16.9
16	Sun	1:05	17.8	1:55	18.4
17	Mon	1:55	19.0	2:30	19.6
18	Tue	2:37	19.8	3:01	20.5
19	Wed	3:15	20.2	3:30	20.9
20	Thur	3:51	20.1	3:57	20.9
21	Fri	4:25	19.5	4:25	20.4
22	Sat	5:02	18.5	4:52	19.6
23	Sun	5:38	17.2	5:21	18.4
24	Mon	6:16	15.6	5:52	17.1
25	Tue	7:04	14.0	6:27	15.7
26	Wed	8:10	12.6	7:14	14.3
27	Thur	9:48	11.9	8:39	13.2
28	Fri	11:32	12.6	10:21	13.2
29	Sat	12:25p	13.9	11:45	14.3
30	Sun	....	...	1:00	15.5

LOW TIDES

Date	Day	A.M. Time	A.M. Feet	P.M. Time	P.M. Feet
1	Sat	7:10	2.5	7:13	6.1
2	Sun	7:45	1.1	7:52	4.3
3	Mon	8:16	-0.2	8:28	2.5
4	Tue	8:48	-1.0	9:04	0.8
5	Wed	9:20	-1.5	9:39	-0.6
6	Thur	9:53	-1.4	10:15	-1.5
7	Fri	10:27	-0.7	10:57	-1.9
8	Sat	11:06	0.5	11:39	-1.6
9	Sun	11:47	2.1	....	...
10	Mon	0:27	-0.7	12:32	3.9
11	Tue	1:24	0.6	1:28	5.8
12	Wed	2:36	1.8	2:47	7.0
13	Thur	4:09	2.3	4:27	7.1
14	Fri	5:37	1.6	5:56	5.8
15	Sat	6:41	0.5	6:57	3.8
16	Sun	7:29	-0.5	7:47	1.9
17	Mon	8:08	-1.1	8:25	0.3
18	Tue	8:43	-1.2	9:04	0.7
19	Wed	9:16	-0.8	9:37	-1.3
20	Thur	9:48	-0.1	10:11	-1.3
21	Fri	10:19	1.0	10:43	-0.8
22	Sat	10:49	2.4	11:15	0.1
23	Sun	11:21	3.9	11:50	1.3
24	Mon	11:54	5.5	....	...
25	Tue	0:29	2.7	12:32	7.1
26	Wed	1:12	4.2	1:24	8.5
27	Thur	2:26	5.3	2:50	9.4
28	Fri	4:11	5.5	4:42	9.0
29	Sat	5:35	4.6	5:57	7.4
30	Sun	6:25	3.3	6:45	5.4

Table 18. Subsistence catch by gear, area and species, Upper Cook Inlet, 1991.[1]

Subdistrict/Gear	Specific Area	Chinook	Sockeye	Coho	Pink	Chum	Total
Central Dip Net							
	Kenai River	44	10,468	146	17	2	10,677
	Kasilof River	10	907	2	3	0	922
	Subtotal	54	11,375	148	20	2	11,599
Central Set Net							
Upper	Ninilchik	62	705	18	11	0	796
	Cohoe	55	2,505	62	9	5	2,636
	Kalifonsky	221	8,490	164	20	12	8,907
	Salamatof	31	4,490	154	38	14	4,727
Kalgin Island		3	71	6	0	0	80
Kustatan		0	12	70	1	0	83
Western		11	247	151	9	27	445
Chinitna Bay		0	0	40	0	0	40
Subtotal		383	16,520	665	88	58	17,714
Northern Set Net							
General		59	1,089	943	84	389	2,564
Eastern		33	294	66	6	10	409
Knik Arm		21	2,952	1,698	339	1,139	6,149
Subtotal		113	4,335	2,707	429	1,538	9,122
Grand Total		**550**	**32,230**	**3,520**	**537**	**1,598**	**38,435**

[1] Does not include Tyonek subsistence or any personal use fishery harvests.

Table 19. Kasilof River personal use gill net fishery salmon harvest by period, 21 June - 24 June, 1991.

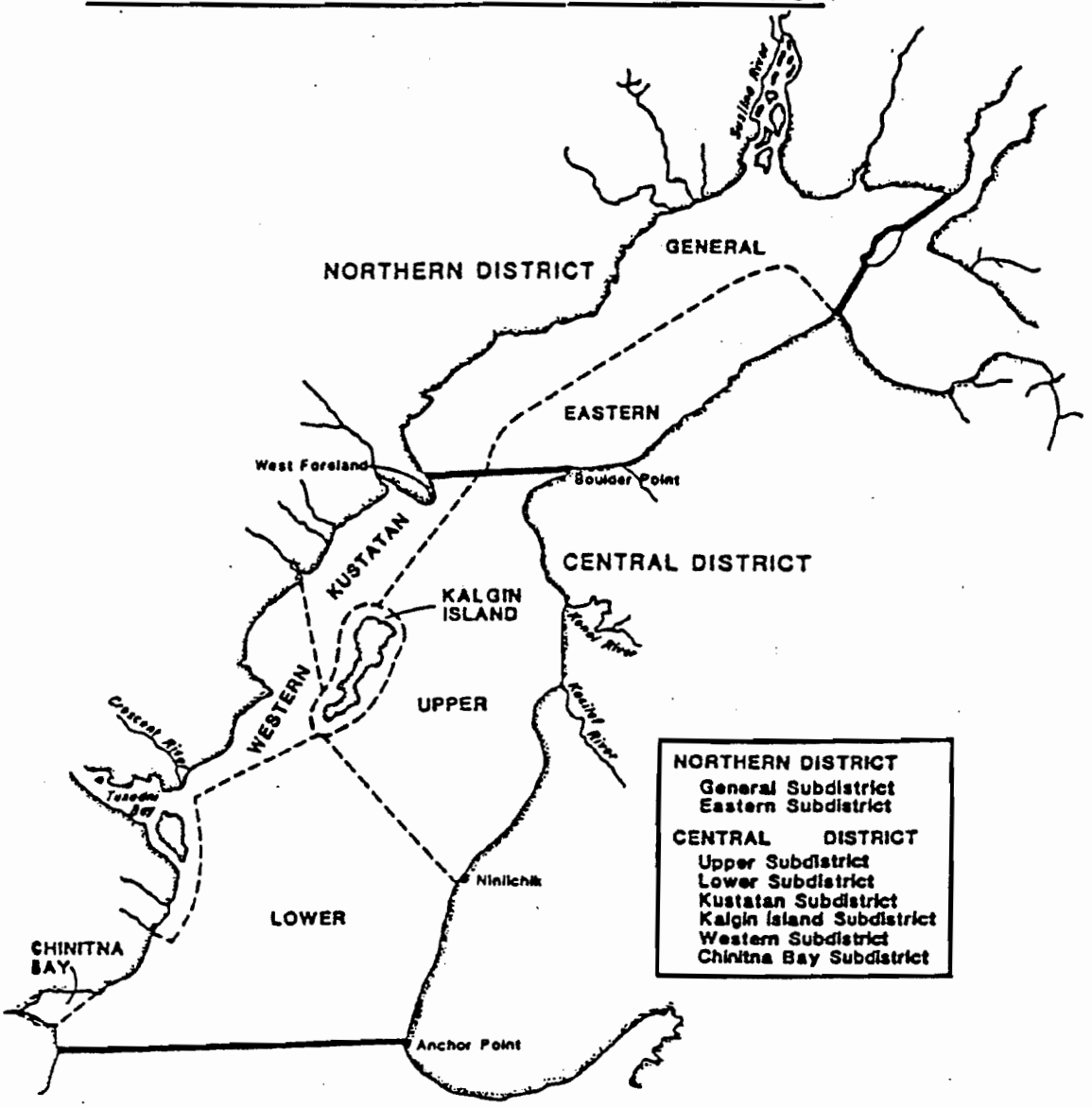
Period	Total	Sockeye Salmon		Chinook Salmon	
Date	Nets	Period	Accum	Period	Accum
6/21	113	1,809	1,809	22	22
6/22	123	1,589	3,398	5	27
6/23	130	2,557	5,955	5	32
6/24	102	2,425	8,380	2	34

Table 20. Central and Northern Districts personal use coho salmon fishery harvest by period, 1990.

Date	Total Nets	Coho Salmon/Net	Coho Salmon Catch	
			Period	Accum
9/16-17	224	4.5	1,014	1,014
9/23-24	147	8.7	1,276	2,290

Figure 1.

UPPER COOK INLET SALMON DISTRICTS



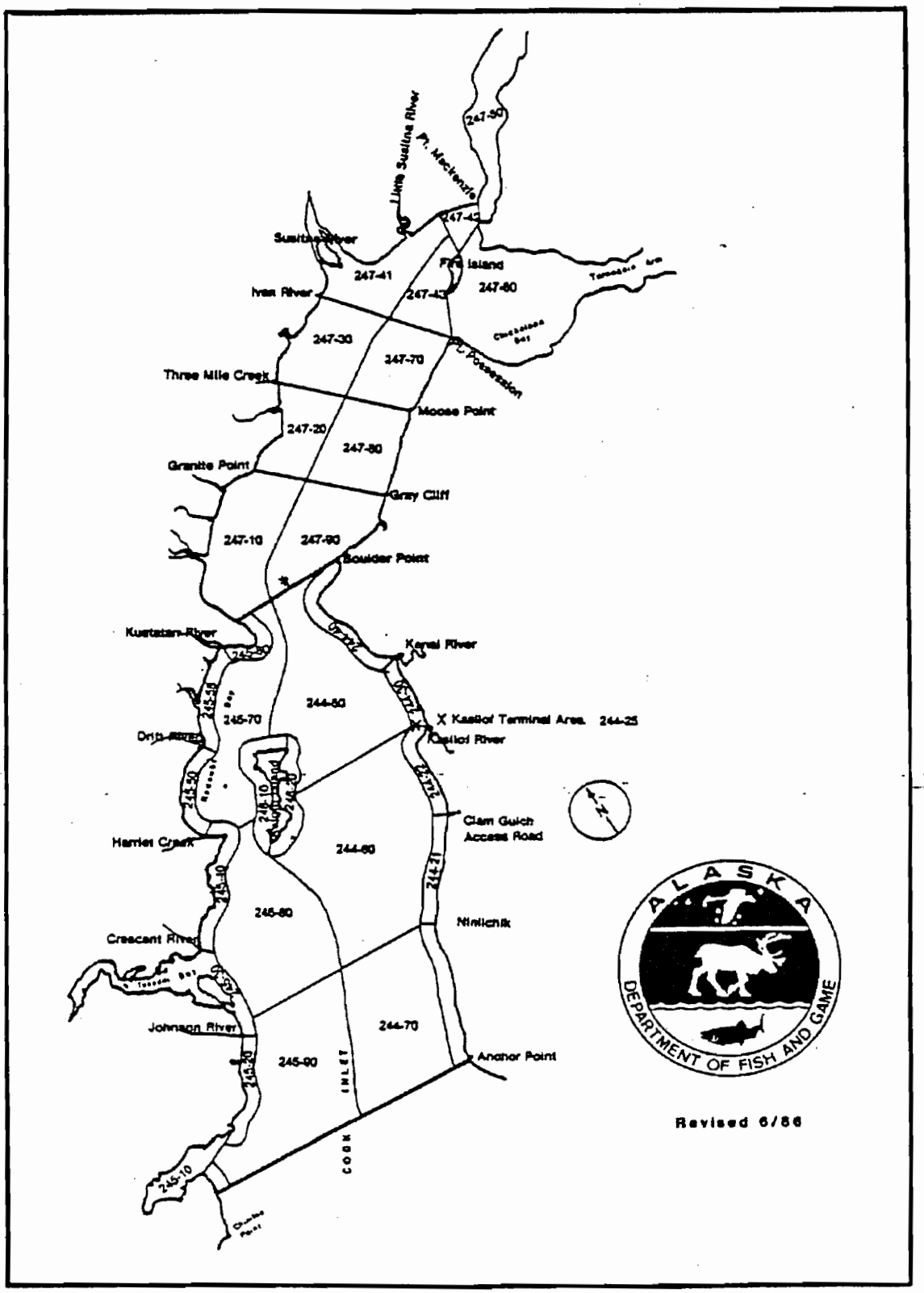


Figure 2. Upper Cook Inlet statistical areas.

Appendix A.1. Upper Cook Inlet commercial chinook salmon harvest by gear type and area, 1966-1991.

Year	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		Total
			East Side		Kalgin/West Side				
	Number	%	Number	%	Number	%	Number	%	
1966	392	4.6	7,329	85.8	401	4.7	422	4.9	8,544
1967	489	6.2	6,686	85.1	500	6.4	184	2.3	7,859
1968	182	4.0	3,304	72.8	579	12.8	471	10.4	4,536
1969	363	2.9	5,834	47.0	3,295	26.6	2,904	23.4	12,407
1970	367	4.4	5,366	64.2	1,165	13.9	1,460	17.5	8,358
1971	237	1.2	7,055	35.7	2,875	14.5	9,598	48.6	19,765
1972	375	2.3	8,600	53.5	2,199	13.7	4,912	30.5	16,086
1973	244	4.7	4,411	84.9	369	7.1	170	3.3	5,194
1974	422	6.4	5,570	84.6	425	6.5	169	2.6	6,586
1975	250	5.2	3,678	77.1	716	15.0	129	2.7	4,773
1976	692	6.4	8,249	75.9	1,469	13.5	457	4.2	10,867
1977	3,411	23.1	9,732	65.8	1,084	7.3	565	3.8	14,792
1978	2,072	12.0	12,468	72.1	2,093	12.1	669	3.9	17,302
1979	1,089	7.9	8,671	63.1	2,264	16.5	1,714	12.5	13,738
1980	889	6.4	9,643	69.9	2,273	16.5	990	7.2	13,795
1981	2,319	18.9	8,359	68.3	837	6.8	725	5.9	12,240
1982	1,293	6.2	13,658	65.4	3,203	15.3	2,716	13.0	20,870
1983	1,124	5.4	15,043	72.9	3,534	17.1	933	4.5	20,634
1984	1,377	13.7	6,165	61.4	1,495	14.9	1,004	10.0	10,041
1985	2,046	8.5	17,723	73.6	2,427	10.1	1,890	7.8	24,086
1986	1,834	4.7	19,810	50.5	2,108	5.4	15,488	39.5	39,240
1987	4,552	11.5	21,379	53.9	1,029	2.6	12,701	32.0	39,661
1988	2,217	7.6	12,870	44.3	1,137	3.9	12,836	44.2	29,060
1989	0	0.0	10,919	40.8	3,092	11.6	12,731	47.6	26,742
1990	621	3.9	4,319	25.7	1,763	10.9	9,582	59.5	16,105
1991	241	1.8	4,891	36.1	1,544	11.4	6,859	50.7	13,535
Average[1]	1,164	7.2	9,225	63.6	1,631	11.4	3,582	17.8	15,603

[1] 1989 excluded from averages.

Appendix A.2. Upper Cook Inlet commercial sockeye salmon harvest by gear type and area, 1966-1991.

Year	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		Total
			East Side		Kalgin/West Side				
	Number	%	Number	%	Number	%	Number	%	
1966	1,103,261	59.6	485,330	26.2	132,443	7.2	131,080	7.1	1,852,114
1967	890,152	64.5	305,431	22.1	66,414	4.8	118,065	8.6	1,380,062
1968	561,737	50.8	317,535	28.7	85,049	7.7	140,575	12.7	1,104,904
1969	371,751	53.7	210,877	30.5	71,191	10.3	38,065	5.5	692,244
1970	474,718	63.6	142,701	19.1	62,724	8.4	66,458	8.9	746,634
1971	423,107	66.4	111,505	17.5	61,639	9.7	40,533	6.4	636,798
1972	505,935	57.5	204,617	23.3	83,422	9.5	85,737	9.7	879,724
1973	375,695	56.1	188,743	28.2	59,973	9.0	45,614	6.8	670,025
1974	265,751	53.5	136,889	27.5	52,957	10.7	41,563	8.4	497,160
1975	368,116	54.2	177,336	26.1	67,758	10.0	65,526	9.7	678,736
1976	1,055,767	63.4	476,376	28.6	62,338	3.7	69,649	4.2	1,664,131
1977	1,073,098	52.3	751,368	36.6	104,265	5.1	123,780	6.0	2,052,511
1978	1,803,358	68.8	660,918	25.2	105,767	4.0	51,624	2.0	2,621,667
1979	454,707	49.2	248,828	26.9	108,422	11.7	112,449	12.2	924,415
1980	770,247	48.9	559,812	35.6	137,922	8.8	105,647	6.7	1,573,637
1981	633,145	44.0	496,193	34.5	60,220	4.2	249,662	17.3	1,439,235
1982	2,103,429	64.5	971,423	29.8	66,952	2.1	118,060	3.6	3,259,864
1983	3,222,007	63.8	1,508,963	29.9	134,544	2.7	184,219	3.6	5,049,733
1984	1,234,669	58.6	490,273	23.3	161,953	7.7	218,695	10.4	2,105,860
1985	2,032,957	50.1	1,561,031	38.4	285,081	7.0	181,191	4.5	4,060,260
1986	2,834,534	59.2	1,657,904	34.6	153,714	3.2	141,830	3.0	4,787,982
1987	5,631,746	59.3	3,495,802	36.8	208,036	2.2	164,602	1.7	9,500,186
1988	4,129,878	60.4	2,428,597	35.5	146,154	2.1	129,713	1.9	6,834,342
1989	3	0.0	4,543,066	90.7	186,828	3.7	280,801	5.6	5,010,698
1990	2,305,742	64.0	1,116,975	31.0	84,949	2.4	96,398	2.7	3,604,064
1991	1,117,514	51.3	844,156	38.8	99,705	4.6	116,201	5.3	2,177,576
Average[1]	1,429,721	57.5	781,983	29.4	106,544	6.3	113,477	6.8	2,431,755

[1] 1989 excluded from average.

Appendix A.3. Upper Cook Inlet commercial coho salmon harvest by gear type and area, 1966-1991.

Year	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		Total
			East Side		Kalgin/West Side				
	Number	%	Number	%	Number	%	Number	%	
1966	80,901	27.9	68,877	23.8	59,509	20.5	80,550	27.8	289,837
1967	53,071	29.9	40,738	22.9	40,066	22.5	43,854	24.7	177,729
1968	167,383	35.8	80,828	17.3	63,301	13.5	156,648	33.5	468,160
1969	33,064	32.8	18,988	18.8	28,392	28.1	20,425	20.2	100,869
1970	114,392	40.9	30,318	10.8	52,363	18.7	82,722	29.6	279,795
1971	35,491	35.4	16,589	16.5	26,188	26.1	22,094	22.0	100,362
1972	21,578	26.7	24,673	30.5	15,319	18.9	19,346	23.9	80,916
1973	31,784	30.5	23,901	22.9	24,744	23.7	23,944	22.9	104,373
1974	75,640	37.8	36,837	18.4	40,610	20.3	47,038	23.5	200,125
1975	88,569	39.9	46,209	20.8	53,910	24.3	33,051	14.9	221,739
1976	80,731	38.7	47,873	22.9	42,224	20.2	37,850	18.1	208,678
1977	110,184	57.2	23,693	12.3	38,093	19.8	20,623	10.7	192,593
1978	76,252	34.8	34,141	15.6	61,711	28.1	47,256	21.5	219,360
1979	114,496	43.2	29,727	11.2	68,306	25.8	52,635	19.8	265,164
1980	89,510	33.0	40,281	14.8	51,487	19.0	90,098	33.2	271,376
1981	226,257	46.6	36,031	7.4	88,492	18.2	134,362	27.7	485,142
1982	416,274	52.5	108,393	13.7	182,205	23.0	85,352	10.8	792,224
1983	326,962	63.3	37,666	7.3	97,827	18.9	53,867	10.4	516,322
1984	213,336	47.4	37,166	8.3	84,615	18.8	114,786	25.5	449,903
1985	357,388	53.6	70,657	10.6	147,331	22.1	91,837	13.8	667,213
1986	506,405	66.9	76,385	10.1	85,932	11.4	88,108	11.6	756,830
1987	202,306	44.8	74,977	16.6	74,930	16.6	98,920	21.9	451,404
1988	277,703	49.6	55,419	9.9	77,058	13.8	149,742	26.7	560,022
1989	743	0.2	81,744	24.1	81,004	23.9	175,710	51.8	339,201
1990	246,845	49.4	40,351	8.1	73,429	14.7	139,401	27.9	500,026
1991	175,504	41.2	30,435	7.1	87,515	20.6	132,270	31.1	425,724
Average[1]	164,881	42.4	45,246	15.1	66,622	20.3	74,671	22.2	351,435

[1] 1989 excluded from average.

Appendix A.4. Upper Cook Inlet commercial pink salmon harvest by gear type and area, 1966-1991.

Year	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		Total
			East Side		Kalgin/West Side				
	Number	%	Number	%	Number	%	Number	%	
1966	593,654	29.6	969,624	48.3	70,507	3.5	371,960	18.5	2,005,745
1967	7,475	23.2	13,038	40.5	3,256	10.1	8,460	26.2	32,229
1968	880,512	38.7	785,887	34.5	75,755	3.3	534,839	23.5	2,276,993
1969	8,336	25.1	11,416	34.4	5,714	17.2	7,680	23.2	33,146
1970	346,485	41.9	281,067	34.0	24,763	3.0	174,193	21.1	826,508
1971	6,433	18.1	18,097	50.8	2,637	7.4	8,423	23.7	35,590
1972	115,096	18.3	403,706	64.2	18,936	3.0	90,830	14.5	628,568
1973	91,901	28.2	80,596	24.7	16,437	5.0	137,249	42.1	326,183
1974	140,734	29.1	291,408	60.2	9,014	1.9	42,879	8.9	484,035
1975	113,868	33.9	112,423	33.5	18,385	5.5	90,953	27.1	335,629
1976	599,600	47.7	479,009	38.1	30,044	2.4	148,090	11.8	1,256,743
1977	286,308	51.7	125,817	22.7	25,212	4.6	116,518	21.0	553,855
1978	934,178	55.3	372,865	22.1	54,785	3.2	327,270	19.4	1,689,098
1979	19,554	26.8	20,033	27.4	7,061	9.7	26,332	36.1	72,980
1980	964,526	54.0	299,444	16.8	47,963	2.7	474,488	26.6	1,786,421
1981	53,888	42.4	15,659	12.3	4,276	3.4	53,325	41.9	127,148
1982	270,380	34.2	432,715	54.7	14,242	1.8	73,307	9.3	790,644
1983	26,628	37.9	18,310	26.0	3,785	5.4	21,604	30.7	70,327
1984	273,411	44.3	220,895	35.8	16,708	2.7	106,284	17.2	617,298
1985	34,228	39.0	17,715	20.2	5,653	6.4	30,232	34.4	87,828
1986	614,453	47.3	530,445	40.8	15,460	1.2	139,002	10.7	1,299,360
1987	38,660	35.2	47,707	43.4	5,229	4.8	18,205	16.6	109,801
1988	226,776	48.3	179,092	38.1	9,890	2.1	54,210	11.5	469,972
1989	1	0.0	37,971	56.3	5,580	8.3	23,878	35.4	67,430
1990	323,955	53.7	225,429	37.3	10,302	1.7	43,944	7.3	603,630
1991	5,791	39.5	2,670	18.2	1,049	7.2	5,153	35.1	14,663
Average[1]	279,073	37.7	238,203	35.2	19,883	4.8	124,217	22.3	661,376

[1] 1989 excluded from average.

Appendix A.5. Upper Cook Inlet commercial chum salmon harvest by gear type and area, 1966-1991.

	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		
			East Side		Kalgin/West Side				
Year	Number	%	Number	%	Number	%	Number	%	Total
1966	424,972	79.8	7,461	1.4	64,725	12.1	35,598	6.7	532,756
1967	233,041	78.5	399	0.1	25,013	8.4	38,384	12.9	296,837
1968	1,022,900	90.7	1,563	0.1	44,986	4.0	58,454	5.2	1,127,903
1969	238,497	89.2	399	0.1	16,949	6.3	11,386	4.3	267,231
1970	705,467	90.4	1,228	0.2	48,783	6.3	24,507	3.1	779,985
1971	274,567	84.8	128	0.0	32,647	10.1	16,603	5.1	323,945
1972	564,253	90.1	1,727	0.3	40,567	6.5	19,780	3.2	626,327
1973	605,730	90.7	1,965	0.3	29,019	4.3	30,847	4.6	667,561
1974	344,594	86.8	506	0.1	15,346	3.9	36,492	9.2	396,938
1975	886,474	93.2	979	0.1	32,741	3.4	30,787	3.2	950,981
1976	405,773	86.5	1,484	0.3	47,877	10.2	14,050	3.0	469,184
1977	1,153,454	93.5	1,413	0.1	54,708	4.4	23,861	1.9	1,233,436
1978	489,065	85.5	4,617	0.8	40,946	7.2	37,331	6.5	571,959
1979	609,239	93.8	907	0.1	30,342	4.7	9,270	1.4	649,758
1980	339,970	87.4	2,147	0.6	30,105	7.7	16,728	4.3	388,950
1981	756,848	91.0	2,415	0.3	26,513	3.2	46,208	5.6	831,984
1982	1,348,510	94.1	4,777	0.3	36,647	2.6	43,006	3.0	1,432,940
1983	1,044,644	93.7	2,764	0.2	38,129	3.4	29,321	2.6	1,114,858
1984	567,480	83.4	3,675	0.5	34,207	5.0	74,727	11.0	680,089
1985	700,848	90.7	4,133	0.5	31,746	4.1	36,122	4.7	772,849
1986	1,012,028	89.2	7,027	0.6	39,078	3.4	76,040	6.7	1,134,173
1987	211,573	60.6	16,608	4.8	53,558	15.3	67,180	19.3	348,919
1988	580,650	81.9	11,841	1.7	40,354	5.7	75,728	10.7	708,573
1989	72	0.1	12,302	10.1	27,705	22.7	81,948	67.2	122,027
1990	289,521	82.4	4,611	1.3	21,355	6.1	35,710	10.2	351,197
1991	215,469	76.9	2,387	0.9	22,974	8.2	39,393	14.1	280,223
Average[1]	589,442	83.3	3,302	0.6	35,118	6.0	35,672	6.1	663,534

[1] 1989 excluded from average.

Appendix A.6. Upper Cook Inlet commercial salmon harvest by gear type and area, 1966-1991.

Year	Central District Drift Gill Net		Central District Set Gill Net				Northern District Set Gill Net		Total
			East Side		Kalgin/West Side				
	Number	%	Number	%	Number	%	Number	%	
1966	2,203,180	47.0	1,538,621	32.8	327,585	7.0	619,610	13.2	4,688,996
1967	1,184,228	62.6	364,541	19.3	135,249	7.1	208,947	11.0	1,892,965
1968	2,612,714	52.6	1,189,117	24.0	269,670	5.4	890,987	18.0	4,962,488
1969	652,011	59.0	247,514	22.4	125,541	11.4	80,910	7.3	1,105,976
1970	1,641,429	62.1	460,676	17.4	189,798	7.2	349,340	13.2	2,641,243
1971	739,835	66.3	153,374	13.7	125,986	11.3	97,251	8.7	1,116,446
1972	1,207,217	54.1	643,323	28.8	160,443	7.2	220,605	9.9	2,231,588
1973	1,105,354	62.3	299,616	16.9	130,542	7.4	237,824	13.4	1,773,336
1974	827,141	52.2	471,210	29.7	118,352	7.5	168,141	10.6	1,584,844
1975	1,457,277	66.5	340,625	15.5	173,510	7.9	220,446	10.1	2,191,858
1976	2,142,563	59.4	1,012,991	28.1	183,952	5.1	270,096	7.5	3,609,602
1977	2,626,455	64.9	912,023	22.5	223,362	5.5	285,347	7.1	4,047,187
1978	3,304,925	64.6	1,085,009	21.2	265,302	5.2	464,150	9.1	5,119,386
1979	1,199,085	62.3	308,166	16.0	216,395	11.2	202,400	10.5	1,926,046
1980	2,165,142	53.7	911,327	22.6	269,750	6.7	687,951	17.1	4,034,170
1981	1,672,457	57.8	558,657	19.3	180,338	6.2	484,282	16.7	2,895,734
1982	4,139,886	65.7	1,530,966	24.3	303,249	4.8	322,441	5.1	6,296,542
1983	4,621,365	68.2	1,582,746	23.4	277,819	4.1	289,944	4.3	6,771,874
1984	2,290,273	59.3	758,174	19.6	298,978	7.7	515,766	13.4	3,863,191
1985	3,127,467	55.7	1,671,259	29.8	472,238	8.4	341,272	6.1	5,612,236
1986	4,969,254	62.0	2,291,571	28.6	296,292	3.7	460,468	5.7	8,017,585
1987	6,088,837	58.3	3,656,473	35.0	342,782	3.3	361,608	3.5	10,449,700
1988	5,217,224	60.7	2,687,819	31.2	274,593	3.2	422,229	4.9	8,601,865
1989	819	0.0	4,686,002	84.2	304,209	5.5	575,068	10.3	5,566,098
1990	3,166,684	62.6	1,391,505	27.5	174,066	3.4	325,035	6.4	5,057,290
1991	1,514,519	52.0	884,539	30.4	212,787	7.3	299,876	10.3	2,911,721
Average[1]	2,475,061	59.8	1,078,074	26.1	229,943	5.6	353,077	8.5	4,136,155

[1] 1989 figures excluded from average.

Appendix A.7. Upper Cook Inlet commercial salmon harvest by species, 1954-1991.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1954	63,780	1,207,046	321,525	2,189,207	510,068	4,291,726
1955	45,926	1,027,528	170,777	101,680	248,343	1,594,254
1956	64,977	1,258,789	198,189	1,595,375	782,051	3,899,381
1957	42,158	643,712	125,434	21,228	1,001,470	1,834,002
1958	22,727	477,392	239,765	1,648,548	471,697	2,860,129
1959	32,651	612,676	106,312	12,527	300,319	1,064,485
1960	27,512	923,314	311,461	1,411,605	659,997	3,333,889
1961	19,737	1,162,303	117,778	34,017	349,628	1,683,463
1962	20,210	1,147,573	350,324	2,711,689	970,582	5,200,378
1963	17,536	942,980	197,140	30,436	387,027	1,575,119
1964	4,531	970,055	452,654	3,231,961	1,079,084	5,738,285
1965	9,741	1,412,350	153,619	23,963	316,444	1,916,117
1966	8,544	1,852,114	289,837	2,005,745	532,756	4,688,996
1967	7,859	1,380,062	177,729	32,229	296,837	1,894,716
1968	4,536	1,104,904	469,850	2,278,197	1,119,114	4,976,601
1969	12,407	692,244	100,962	34,030	269,842	1,109,485
1970	8,358	746,634	279,989	826,639	800,829	2,662,449
1971	19,765	636,798	100,636	35,624	327,029	1,119,852
1972	16,086	879,724	80,933	628,576	630,016	2,235,335
1973	5,194	670,025	104,373	326,183	667,561	1,773,336
1974	6,586	497,160	200,125	484,035	396,938	1,584,844
1975	4,773	678,736	221,739	335,629	950,981	2,191,858
1976	10,867	1,664,131	208,710	1,256,743	469,806	3,610,257
1977	14,792	2,052,511	192,599	553,855	1,233,722	4,047,479
1978	17,302	2,621,667	219,360	1,689,098	571,959	5,119,386
1979	13,738	924,415	265,166	72,982	650,357	1,926,658
1980	13,795	1,573,637	271,378	1,786,430	390,810	4,036,050
1981	12,240	1,439,235	485,148	127,169	833,549	2,897,341
1982	20,870	3,259,864	793,937	790,648	1,433,866	6,299,185
1983	20,634	5,049,733	516,322	70,327	1,114,858	6,771,874
1984	10,041	2,105,860	449,903	617,298	680,089	3,860,839
1985	24,086	4,060,260	667,213	87,828	772,829	5,612,216
1986	39,240	4,787,982	756,830	1,299,360	1,134,173	8,017,585
1987	39,661	9,500,186	451,404	109,801	349,132	10,450,184
1988	29,060	6,834,342	560,022	469,972	708,573	8,601,969
1989	26,742	5,010,698	339,201	67,430	122,027	5,566,098
1990	16,105	3,604,064	500,026	603,630	351,197	5,075,022
1991	13,535	2,177,576	425,724	14,663	280,223	2,911,721
Average	20,745	2,041,849	312,476	779,378	635,942	3,790,331

Appendix A.8. Approximate exvessel value of the Upper Cook Inlet commercial salmon harvest by species, 1960-1991.

Year	Chinook	%	Sockeye	%	Coho	%	Pink	%	Chum	%	Total
1960	$140,000	5.0	$1,334,000	47.9	$307,000	11.0	$663,000	23.8	$343,000	12.3	$2,787,000
1961	$100,000	4.7	$1,687,000	79.4	$118,000	5.6	$16,000	0.8	$204,000	9.6	$2,125,000
1962	$100,000	2.5	$1,683,000	42.3	$342,000	8.6	$1,274,000	32.0	$582,000	14.6	$3,981,000
1963	$89,000	4.6	$1,388,000	72.3	$193,000	10.1	$13,000	0.7	$236,000	12.3	$1,919,000
1964	$20,000	0.5	$1,430,000	38.9	$451,000	12.3	$1,131,000	30.8	$646,000	17.6	$3,678,000
1965	$50,000	2.0	$2,099,000	82.1	$109,000	4.3	$70,000	2.7	$230,000	9.0	$2,558,000
1966	$50,000	1.2	$2,727,000	64.4	$295,000	7.0	$823,000	19.4	$338,000	8.0	$4,233,000
1967	$49,000	1.9	$2,135,000	82.6	$187,000	7.2	$13,000	0.5	$202,000	7.8	$2,586,000
1968	$30,000	0.7	$1,758,000	40.4	$515,000	11.8	$1,209,000	27.8	$843,000	19.4	$4,355,000
1969	$70,000	4.3	$1,231,000	75.2	$109,000	6.7	$23,000	1.4	$204,000	12.5	$1,637,000
1970	$49,000	1.8	$1,135,000	42.5	$354,000	13.3	$387,000	14.5	$745,000	27.9	$2,670,000
1971	$189,000	10.7	$1,102,000	62.2	$143,000	8.1	$22,000	1.2	$316,000	17.8	$1,772,000
1972	$217,000	6.3	$1,795,000	52.0	$135,000	3.9	$473,000	13.7	$834,000	24.1	$3,454,000
1973	$122,000	2.0	$3,214,000	52.2	$320,000	5.2	$363,000	5.9	$2,134,000	34.7	$6,153,000
1974	$210,000	3.2	$3,058,000	46.5	$843,000	12.8	$946,000	14.4	$1,521,000	23.1	$6,578,000
1975	$65,000	1.0	$2,596,000	39.0	$821,000	12.3	$423,000	6.4	$2,753,000	41.3	$6,658,000
1976	$276,000	2.0	$8,626,000	63.2	$818,000	6.0	$1,879,000	13.8	$2,040,000	15.0	$13,639,000
1977	$525,000	2.4	$13,274,000	61.8	$933,000	4.3	$772,000	3.6	$5,991,000	27.9	$21,495,000
1978	$667,000	2.0	$26,128,000	80.3	$1,388,000	4.3	$2,154,000	6.6	$2,217,000	6.8	$32,554,000
1979	$625,000	4.3	$8,094,000	55.2	$1,658,000	11.3	$89,000	0.6	$4,201,000	28.6	$14,667,000
1980	$417,000	3.2	$7,932,000	61.6	$902,000	7.0	$2,114,000	16.4	$1,516,000	11.8	$12,881,000
1981	$422,000	2.6	$11,071,000	67.9	$2,638,000	16.2	$179,000	1.1	$2,005,000	12.3	$16,315,000
1982	$753,000	2.1	$25,029,000	69.0	$4,139,000	11.4	$515,000	1.4	$5,851,000	16.1	$36,287,000
1983	$585,000	2.0	$23,841,000	81.5	$1,603,000	5.5	$38,000	0.1	$3,195,000	10.9	$29,262,000
1984	$311,990	1.8	$12,445,633	71.8	$2,041,480	11.8	$522,419	3.0	$2,007,827	11.6	$17,329,349
1985	$799,173	2.3	$27,479,840	80.0	$3,358,083	9.8	$57,440	0.2	$2,646,553	7.7	$34,341,089
1986	$881,356	1.9	$37,665,832	83.3	$2,838,881	6.3	$698,527	1.5	$3,123,485	6.9	$45,208,081
1987	$1,609,681	1.6	$96,331,886	94.9	$2,368,968	2.3	$84,547	0.1	$1,115,477	1.1	$101,510,559
1988	$1,204,321	1.0	$111,102,230	91.2	$4,731,340	3.9	$650,309	0.5	$4,113,356	3.4	$121,801,556
1989	$803,494	1.4	$56,194,753	95.0	$1,674,393	2.8	$86,012	0.1	$415,535	0.7	$59,174,187
1990	$436,822	1.1	$35,804,485	88.0	$2,419,202	5.3	$512,590	1.3	$1,495,827	3.7	$40,668,906
1991	$348,553	2.3	$12,259,753	80.4	$1,996,348	13.1	$5,472	0.0	$643,392	4.2	$15,253,518

Appendix A.9. Commercial herring harvest by fishery, Upper Cook Inlet, 1973-1991.

	Harvest (Tons)			
Year	Eastside	Chinitna Bay	Tuxedni Bay	Total
1973	13.8	0	0	13.8
1974	36.7	0	0	36.7
1975	6.2	0	0	6.2
1976	5.8	0	0	5.8
1977	17.3	0	0	17.3
1978	8.3	55.3	0	63.6
1979	67.3	96.2	24.8	188.3
1980	37.4	20.0	86.5	143.9
1981	86.2	50.5	84.9	221.6
1982	60.2	91.8	50.2	202.2
1983	165.3	49.2	238.2	452.7
1984	117.5	90.6	159.0	367.1
1985	121.7	47.4	220.5	389.6
1986	178.9	111.1	191.9	481.9
1987	130.5	65.1	152.5	348.1
1988	50.7	23.4	14.1	88.2
1989	55.2	122.3	34.3	211.7
1990	55.4	55.9	16.1	127.4
1991	13.4	15.7	1.6	30.7

Appendix A.10. Commercial harvest of razor clams in Cook Inlet, 1919-1991.

Year	Pounds	Year	Pounds
1919	76,963	1955	0
1920	11,952	1956	0
1921	72,000	1957	0
1922	510,432	1958	0
1923	470,280	1959	0
1924	156,768	1960	372,872
1925	0	1961	277,830
1926	0	1962	195,650
1927	25,248	1963	0
1928	0	1964	0
1929	0	1965	0
1930	0	1966	0
1931	No Record	1967	0
1932	93,840	1968	0
1933	No Record	1969	0
1934	No Record	1970	0
1935	No Record	1971	14,755
1936	No Record	1972	31,360
1937	8,328	1973	34,415
1938	No Record	1974	0
1939	No Record	1975	10,020
1940	No Record	1976	0
1941	0	1977	1,762
1942	0	1978	45,931
1943	0	1979	144,358
1944	0	1980	140,420
1945	15,000	1981	441,949
1946	11,424	1982	460,639
1947	11,976	1983	269,618
1948	2,160	1984	261,742
1949	9,672	1985	319,034
1950	304,073	1986	258,632
1951	112,320	1987	312,349
1952	0	1988	392,610
1953	0	1989	222,747
1954	0	1990	323,602
		1991	201,320

Appendix A.11. Escapement goals and counts of sockeye salmon in selected streams of Upper Cook Inlet, 1968-1991.

Year	Kenai River		Kasilof River		Fish Creek	
	Escapement Goal	Escapement Estimate[1]	Escapement Goal	Escapement Estimate[1]	Escapement Goal	Escapement Estimate[2]
1968	0	88,000	0	93,000	0	19,616
1969	150,000	53,000	75,000	46,000	0	12,456
1970	150,000	73,000	75,000	37,000	0	25,000
1971	150,000	--	75,000	--	0	31,900
1972	150,000-250,000	318,000	75,000-150,000	112,000	0	6,981
1973	150,000-250,000	367,000	75,000-150,000	40,000	0	2,705
1974	150,000-250,000	161,000	75,000-150,000	64,000	0	16,225
1975	150,000-250,000	142,000	75,000-150,000	48,000	0	29,882
1976	150,000-250,000	380,000	75,000-150,000	140,000	0	14,032
1977	150,000-250,000	708,000	75,000-150,000	155,000	0	5,183
1978	350,000-500,000	399,000	75,000-150,000	117,000	0	3,555
1979	350,000-500,000	285,000	75,000-150,000	152,000	0	68,739
1980	350,000-500,000	464,000	75,000-150,000	187,000	0	62,828
1981	350,000-500,000	408,000	75,000-150,000	257,000	0	50,479
1982	350,000-500,000	620,000	75,000-150,000	180,000	50,000	28,164
1983	350,000-500,000	630,000	75,000-150,000	210,000	50,000	118,797
1984	350,000-500,000	345,000	75,000-150,000	232,000	50,000	192,352
1985	350,000-500,000	501,000	75,000-150,000	503,000	50,000	68,577
1986	350,000-500,000	501,000	150,000-250,000	276,000	50,000	29,800
1987	400,000-700,000	1,597,000	150,000-250,000	249,000	50,000	91,215
1988	400,000-700,000	1,021,500	150,000-250,000	202,000	50,000	71,603
1989	400,000-700,000	1,599,959	150,000-250,000	158,206	50,000	67,224
1990	400,000-700,000	658,908	150,000-250,000	144,289	50,000	50,000
1991	400,000-700,000	647,597	150,000-250,000	238,269	50,000	59,269

Year	Susitna River		Crescent River		Packers Creek	
	Escapement Goal	Escapement Estimate[1]	Escapement Goal	Escapement Estimate[1]	Escapement Goal	Escapement Estimate[2]
1978	200,000	94,000	0	N/C	0	N/C
1979	200,000	157,000	50,000	87,000	0	N/C
1980	200,000	191,000	50,000	91,000	0	16,477
1981	200,000	340,000	50,000	41,000	0	13,024
1982	200,000	216,000[3]	50,000	59,000	0	15,687
1983	200,000	112,000[4]	50,000	92,000	0	18,403
1984	200,000	194,000[5]	50,000	118,000	0	30,684
1985	200,000	228,000[5]	50,000	129,000	0	36,850
1986	200,000	92,000[6]	50,000-100,000	N/A	0	29,604
1987	200,000	66,000[6]	50,000-100,000	119,000	0	35,401
1988	100,000-150,000[6]	52,347[6]	50,000-100,000	57,716	15,000-25,000	18,607
1989	100,000-150,000[6]	96,269[6]	50,000-100,000	71,064	15,000-25,000	22,304
1990	100,000-150,000[6]	140,379[6]	50,000-100,000	52,180	15,000-25,000	31,868
1991	100,000-150,000[6]	109,632[6]	50,000-100,000	44,578	15,000-25,000	41,275

[1] Derived from sonar counters unless otherwise noted.
[2] Weir counts.
[3] Poor field conditions make this a minimum estimate; mark/recapture estimate from Su-Hydro studies was 265,000.
[4] Minimum estimate. Combining Yentna sonar with Sunshine Station mark/recapture estimate yields 176,000.
[5] Yentna River sonar count combined with Sunshine Station mark/recapture estimate.
[6] Yentna River only.

Appendix A.12. Average price paid for commercially harvested salmon, Upper Cook Inlet, 1969-1991.[1]

Year	Chinook	Sockeye	Coho	Pink	Chum
1969	0.38	0.28	0.19	0.14	0.12
1970	0.40	0.28	0.25	0.14	0.14
1971	0.37	0.30	0.21	0.15	0.15
1972	0.47	0.34	0.27	0.19	0.20
1973	0.62	0.65	0.50	0.30	0.42
1974	0.88	0.91	0.66	0.46	0.53
1975	0.54	0.63	0.54	0.35	0.41
1976	0.92	0.76	0.61	0.37	0.54
1977	1.26	0.86	0.72	0.38	0.61
1978	1.16	1.32	0.99	0.34	0.51
1979	1.63	1.41	0.98	0.34	0.88
1980	1.15	0.85	0.57	0.34	0.53
1981	1.46	1.20	0.83	0.38	0.65
1982	1.27	1.10	0.72	0.18	0.49
1983	0.97	0.74	0.45	0.18	0.36
1984	1.08	1.00	0.64	0.21	0.39
1985	1.20	1.20	0.70	0.20	0.45
1986	0.90	1.40	0.60	0.15	0.38
1987	1.40	1.50	0.80	0.22	0.45
1988	1.30	2.47	1.20	0.37	0.76
1989	1.25	1.70	0.75	0.40	0.47
1990	1.20	1.55	0.75	0.25	0.60
1991	1.20	1.00	0.77	0.12	0.35

[1] Expressed as dollars paid per pound.
Data Source: 1969-1983 - Commercial Fisheries Entry Commission.
1984-1991 - Random fish-ticket averages.

Appendix A.13. Average weight[1] (in pounds) of commercially harvested salmon, Upper Cook Inlet, 1972-1991.

Year	Chinook	Sockeye	Coho	Pink	Chum
1972	28.76	6.00	6.18	3.96	6.62
1973	37.85	7.38	6.13	3.71	7.61
1974	36.20	6.76	6.39	4.25	7.21
1975	25.14	6.07	6.86	3.60	7.06
1976	27.63	6.82	6.43	4.04	8.04
1977	28.19	7.52	6.73	3.67	7.96
1978	33.24	7.55	6.39	3.75	7.60
1979	27.93	6.21	6.38	3.58	7.34
1980	26.29	5.93	5.83	3.48	7.32
1981	23.64	6.41	6.55	3.70	7.66
1982	28.42	6.98	7.24	3.62	8.33
1983	29.64	6.38	6.90	3.04	7.96
1984	28.77	5.91	7.09	4.03	7.57
1985	27.65	5.64	7.19	3.27	7.61
1986	25.91	5.77	6.41	3.72	7.42
1987	28.99	6.73	6.57	3.50	7.10
1988	29.67	6.61	7.05	3.74	7.67
1989	24.04	6.60	6.58	3.19	7.25
1990	22.60	6.41	6.45	3.40	7.10
1991	21.46	5.63	6.09	3.11	6.56
Average	28.10	6.46	6.57	3.62	7.44

[1] Total poundage divided by numbers of fish from fish ticket totals.

Appendix A.14. Registered units of gillnet fishing effort by gear type in Cook Inlet, 1960-1991.[1]

	Drift			Set			
Year	Resident	Non-Resident	Sub-total	Resident	Non-Resident	Sub-total	Total
1960	221	67	288	511	59	570	858
1961	279	93	372	564	22	586	958
1962	260	112	372	589	28	617	989
1963	333	139	472	626	34	660	1,132
1964	323	145	468	596	35	631	1,099
1965	329	145	474	556	34	590	1,064
1966	328	176	504	580	48	628	1,132
1967	350	186	536	554	50	604	1,140
1968	407	204	611	638	43	681	1,292
1969	497	208	687	686	42	728	1,415
1970	537	220	757	707	65	772	1,529
1971	519	191	710	693	38	731	1,441
1972	419	152	571	672	35	701	1,272
1973	516	146	662	632	43	775	1,437
1974	458	150	608	764	39	803	1,411
1975	291	162	453	613	44	657	1,110
1976	343	171	514	669	42	711	1,225
1977	360	179	539	690	41	731	1,270
1978	366	183	549	698	44	742	1,291
1979	372	182	554	700	44	744	1,298
1980	373	179	554	697	47	744	1,298
1981	414	185	599	688	59	747	1,346
1982	416	175	591	697	51	748	1,339
1983	417	170	587	685	60	745	1,332
1984	426	162	588	672	72	744	1,332
1985	420	170	590	666	65	731	1,321
1986	436	178	614	682	76	758	1,372
1987	422	164	586	666	77	743	1,329
1988	421	163	584	659	82	741	1,325
1989	420	165	585	648	95	743	1,328
1990	408	174	585	648	97	745	1,330
1991	414	168	582	643	98	741	1,323

[1]Source: 1960-74 ADF&G unpublished reports, 1975-91 Commercial Fisheries Entry Commission

Appendix A.15. Forecast[1] and projected[2] commercial harvests of salmon by species, Upper Cook Inlet, 1984-1991.

	Sockeye			Coho			Pink			Chum			Chinook		
Year	Forecast	Actual	Error	Projected	Actual	Error	Projected	Actual	Error	Projected	Actual	Error	Projected	Actual	Error
1984	2,200,000	2,102,767	- 4%	250,000	442,619	+77%	1,700,000	622,510	-63%	350,000	684,124	+95%	14,000	8,819	-37%
1985	3,700,000	4,060,260	+10%	250,000	667,213	+167%	112,500	87,828	-22%	700,000	772,829	+10%	17,500	24,086	+38%
1986	4,200,000	4,787,982	+14%	450,000	756,830	+68%	1,250,000	1,299,360	+ 4%	900,000	1,134,173	+26%	32,500	39,240	+21%
1987	4,800,000	9,500,186	+98%	500,000	451,404	-10%	150,000	109,801	-27%	1,000,000	349,132	-65%	30,000	39,661	+32%
1988	5,300,000	6,834,342	+29%	400,000	560,022	+40%	400,000	469,972	+17%	800,000	708,573	-11%	35,000	29,060	-17%
1989	2,500,000	5,010,698	+100%	400,000	339,201	-15%	100,000	67,430	-33%	800,000	122,027	-85%	30,000	26,742	-11%
1990	4,300,000	3,604,064	-16%	250,000	500,026	+100%	600,000	603,630	+1%	400,000	351,197	-12%	25,000	16,105	-36%
1991	3,200,000	2,177,576	-32%	400,000	425,724	+6%	90,000	14,663	-84%	500,000	280,223	-44%	20,000	13,535	-32%
1992	3,600,000			400,000			400,000			350,000			20,000		
Average Error (unsigned)			38%			60%			31%			43%			28%

[1] Harvest forecasts have typically been prepared using average return per spawner values, parent-year escapements and average marine maturity schedules or time series modeling tempered by available juvenile production data.

[2] Harvest projections are prepared using subjective estimates of parent-year escapements, gross trends in harvest and expected intensity of fishery.

Appendix A.16. Subsistence and personal use salmon harvest, Upper Cook Inlet, 1980-1991.

Fishery	No. of Permits	Chinook	Sockeye	Coho	Pink	Chum
Tyonek Subsistence						
1980	67	1,927	261	0	0	0
1981	70	2,002	269	62	32	13
1982	69	1,574	274	113	15	4
1983	73	2,755	251	78	0	6
1984	70	2,364	310	66	3	23
1985	176	1,967	163	91	0	10
1986	101	1,674	198	210	45	44
1987	64	1,552	161	149	10	24
1988	47	1,474	53	185	6	9
1989	49	1,202	67	70	0	1
1990	42	797	92	366	124	10
1991	51	842	20	72	0	0
Non-Commercial Gillnet						
1981	1,108	68	466	12,713	149	305
Kasilof Personal Use						
1982	649	372	7,543	24	17	0
1983	684	307	8,846	0	0	0
1984	698	165	12,926	0	0	0
1985	692	203	10,746	0	0	0
1986	N/A	168	9,609	0	0	0
1987	N/A	184	9,375	0	0	0
1988	N/A	118	9,803	0	0	0
1989	N/A	186	9,928	0	0	0
1990	N/A	133	7,123	0	0	0
1991	N/A	34	8,380	0	0	0
Fall Coho Personal Use/Subsistence						
1983	295	0	0	712	0	0
1984	309	1	2	2,261	10	7
1985	998	50	805	11,265	108	53
1986	892	0	0	2,422	0	0
1987	486	8	9	2,213	2	37
1988	449	2	19	2,662	38	10
1989	365	0	0	2,376	0	0
1990	420	0	0	2,290	0	0
1991	360	0	0	2,703	0	8
Northern/Central Districts Subsistence						
1985	638	117	2,218	1,427	90	121
1991	7,065	550	32,230	3,520	537	1,598
Knik Arm Subsistence						
1985	405	4	1,649	2,055	48	212
Kenaitze Tribal Fishery						
1989	N/A	95	2,212	1,814	0	0
1990	N/A	53	3,477	1,117	326	0
1991	N/A	34	2,965	1,945	4	0